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ABSTRACT

The purpose of the study was (1) to develop an accurate and comprehensive listing of the major goals and specific needs in large city vocational education programs using input from vocational education program practitioners and a literature review, (2) to determine the relative national priority for meeting these goals and needs as viewed by urban vocational educators, and (3) to explore the extent to which the priorities of large cities are related to their size, geographic location, and percent of minority population. The population was all cities with over 100,000 residents as identified in the 1970 census and the largest city in States which do not have a city with at least 100,000 residents. Two sequential mail out surveys and personal interviews in selected large cities were the primary data gathering techniques. The study was comprised of four stages: (1) Feasibility study, (2) exploration of the needs, (3) synthesis of the needs, and (4) rating the priority of the needs. This report of the study includes a complete discussion of the problem, review of literature, procedures, results (including the prioritized rating of program needs from high to low, and other rankings and comparisons), conclusions, and recommendations. The appendixes contain the survey instruments and other survey results. (LAS)

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ED141572

NATIONAL LARGE CITIES
VOCATIONAL EDUCATION NEEDS STUDY

Kay Angona Adams

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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1977

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PREFACE

Needs assessment provides the foundation for any well planned change. Thus, identifying needs is important if planning the future of vocational education in the large cities of America is to be meaningful and profitable. The range and scope of identified needs must be internalized by the various segments of the community that are involved in the educational process.

As eluminated in this study, there are serious and unresolved needs in large city vocational education programs. The resources of the great cities, both financial and human, have not been adequate to resolve the difficulties that increase rather than diminish. An important first step to meeting these needs systematically is the creation of a national information base. The major questions that need to be answered are:

1. What are the needs for vocational education programs in large cities?
2. What is the relative priority of these needs as perceived by urban vocational educators?
3. How do the vocational education priorities of large cities differ according to their size, geographic location, and minority composition?

These questions have been answered by this study. It is now incumbent upon the local directors of vocational education to stimulate the use of these data at the local, state, and national levels. A master plan is needed to bring about changes in curriculum, instructional improvement, personnel development, relevant research and evaluation, and increased funding for vocational education in the large cities of America.

As a local administrator of vocational education, I am convinced that some of the problems we are experiencing in vocational education can be solved by following the recommendations set forth in this study. The study most certainly will be useful in communicating the needs of large

urban programs to significant others. This document should be placed in the hands of state vocational education leaders, senators, congressmen, state legislators, local board of education members, superintendents, academic supervisors, home and school associations, business and industry leaders, teacher educators, and the vocational education staffs in the large cities.

It is incumbent upon the local administrator of vocational education to make known the felt needs of vocational educators as well as the recommendations for future action. This information, in the hands of public officials, advisory groups, and the community holds the capacity of producing the power base to generate sound change.

Stanley B. Cohen
Director of Vocational Education
School District of Philadelphia
March 1977

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I. THE PROBLEM

Introduction

Large cities are an integral part of the American experience and heritage. Today's cities, although often tarnished by a myriad of urban blights, are still the centers of finance, commerce, and government, the focal points for the arts, the homes of eminent universities and research hospitals.

The popular media do not let us forget about big cities and their problems. High unemployment, increasing crime rates, diminishing tax bases, and population shifts are some of the social and economic problems burdening many cities.

In May 1975, the U. S. Department of Labor reported the rate of unemployment at 9.2 percent--the highest in 34 years. The unemployment rate has come down slightly but it is expected to remain above seven percent for the next few years. To add to the unemployment problem, the job market in many cities is shrinking. Many central city businesses and industries are moving to the suburbs to avoid high tax rates. Budget trimming has eliminated many city jobs.

The U. S. crime rate is climbing at record speed. Statistics compiled by the Federal Bureau of Investigation (March 1975) show that serious crime increased 17 percent in 1974 over 1973. This is the greatest increase in any year since the FBI started collecting nationwide crime data in 1930. The profile of the criminal shows almost half of all arrests are of school age teenagers (under 18) and young adults (25). Almost half of the criminals arrested are also from racial minority groups. Crime inside cities is far more common than outside. The number of crimes per 1,000 of population is 52.1 in cities, 36.1 in suburbs, and 15.9 in rural areas (FBI, 1975).

Perhaps the American city's most pressing problem is the erosion of its tax base. Cities are the major areas for the aged, welfare recipients, and low income families. Yet cities also house the majority of the hospitals, schools, and other property tax exempt facilities and institutions. The result is many cities cannot afford to finance the ever increasing cost of essential municipal services with already overstrained revenue sources (U. S. News and World Report, April 1975).

In 1970, approximately 68.6 percent of the total population of the U. S. lived in large metropolitan areas (U. S. Bureau of the Census, 1970). But big cities, especially in the Eastern half of the U. S. are losing people.

Cities' populations have decreased 1.9 percent overall since 1970. Among many of the biggest cities, the population is as low now as it was in the early 1900's. At the same time, the number of people living in the suburbs, small towns and rural areas has increased since 1970. Suburban populations have increased 8.4 percent. Small town and rural populations have increased 5.0 percent (U. S. Bureau of the Census, 1975).

The energy crisis and urban homesteading programs have helped lure some people back to the cities. Pierre di Vise, Professor of Urban Sciences at the University of Chicago predicts the major variables that would induce people to come back into the city are changing the crime picture and changing the school picture. The school situation is generally viewed as the number two problem (next to crime) when urban residents are polled with regard to their perceptions of problems in the city. This refers both to the quality of education and to the fear of schools in which there are high proportions of Blacks (U. S. News and World Report, April 1976).

The social and economic problems in large cities directly and constantly affect the quality of education in many urban schools. Urban schools typically have higher costs for the delivery of services, larger classes, and a more diversified group of clients to serve than rural or suburban schools. Urban schools appear to be plagued by more

disruptive activities, such as teacher strikes, court ordered desegregation, drastic budget cuts, crime and vandalism than their rural and suburban counterparts (Riles, 1970).

The vocational education program located in big cities are even more dramatically affected by an urban location. Urban vocational education programs tend to house a higher percentage of disadvantaged and minority students than academic programs in the same location (Bureau of Adult and Occupational Education, 1972). Yet, the extent to which education programs are actually affected by their urban location is still unknown. The degree to which needs are common to many large cities or are unique and varied is also unknown. Preconceived ideas about education in urban areas abound. Some commonly held conceptions may be misconceptions. For example:

1. Inner-city vocational facilities are extremely old and poorly maintained. (Coleman, et al., 1966)

2. Equipment in these facilities is antiquated and inadequately maintained. (Healas, 1975)

3. Vocational education personnel in inner-cities tend to be less than adequate. (Study Group on Urban Education, 1968)

4. Student control problems are different from and more intense than those encountered in rural or suburban areas. (Cohen, 1968).

5. The placement of persons for cooperative work experience or employment is less difficult. (Kaufman and Schaefer, 1967)

6. Parents and other laymen are not concerned about education. (Passow, 1964)

7. Security against personal and/or property crimes is difficult. (National Advisory Council on Civil Disorders, 1968)

8. Vocational education programs in the urban areas are primarily designed to meet the needs of delinquent and pre-delinquent secondary school students. (Keach, et al., 1967)

To separate myth from reality concerning the current conditions and needed changes in urban vocational education programs, a careful investigation is required.

Statement of the Problem

There are serious and unresolved needs in large city vocational education programs. The resources of many cities, both financial and human, have not been adequate to resolve the difficulties that increase rather than diminish. An accurate and comprehensive portrayal of urban vocational education needs for the nation does not exist. An important first step to systematically meeting needs is the creation of a national data base. The major questions to be addressed through this study are:

1. What are the perceived needs for vocational education programs in large cities?

2. What is the relative priority of these needs as perceived by urban vocational educators?

3. How do the vocational education priorities of cities differ by their size, geographic location, and minority level?

Purpose of the Study

The purpose of the National Large Cities Vocational Education Needs Study is threefold:

1. To develop an accurate and comprehensive listing of the major goals and specific needs in large city vocational education programs using input from vocational education practitioners and a literature review.

2. To determine the relative national priority for meeting these goals and needs as viewed by urban vocational educators.

3. To explore the extent to which the priorities of large cities are related to their size, geographic location, and percent of minority population.

Objectives

1. To develop statements indicating major needs in large city vocational education programs based on responses petitioned from central office staffs for vocational education (directors, supervisors, and coordinators) in 160 large cities through an open-ended mail survey.

2. To develop statements indicating major needs in large city vocational education programs using the results from in-depth personal interviews with representative members from both the educational and manpower communities in 14 major urban areas.

3. To develop statements indicating major needs in large city vocational education programs using current literature on urban education, vocational education, and urban vocational education.

4. To compile, edit, and summarize the statements indicating major needs from the three sources described above (mail surveys, personal interviews, and literature reviews) into a composite list of statements indicating major needs.

5. To organize the statements by substantive content into related sets of specific need statements with each set headed by a more general major goal statement.

6. To determine the relative national priority of the major goals for urban vocational education programs as viewed by the directors of vocational education in large cities.

7. To determine the relative degree of need of the more specific statements about needs in urban vocational education programs for the nation as viewed by central office staff (directors, supervisors, and coordinators) in large city school systems.

8. To describe the differences in the expressed priorities for vocational education programs among larger, medium and smaller cities.

9. To describe the differences in the expressed priorities for vocational education programs among cities in four geographic areas of the United States: Northeast, North Central, West, and South.

10. To describe the differences in the expressed priorities for vocational education programs among cities with higher, medium, and lower levels of minority population.

Rationale

Accurate national information about needs provides a more accountable basis for making decisions and justifying activities. The information will potentially be useful at the national level:

1. To determine resource allocation priorities for Federal legislation and funds.

2. To prepare planning documents and requests for proposals.

3. To identify areas of concern which require research or development by national and regional centers and laboratories.

4. To guide the activities of national professional associations.

The information may also be useful at the local, state, and regional levels:

1. To establish criteria for evaluating local programs.
2. To communicate a more compelling picture of the vocational education needs to governing boards of vocational education and community members.
3. To prepare planning documents and responses to proposals.
4. To revise and/or develop program objectives.

Scope and Limitations

The study focuses on the perceptions of various individuals about major needs. Individuals' perceptions of needs may differ from actual, objectively measured conditions. To help minimize the problems brought about by a lack of objective data, the statements of need have been carefully developed. Interviews with educators, students, employers and concerned citizens; open-ended responses from local vocational educators; opinions of experts; and review of literature were used to develop need statements so their validity, comprehensiveness and representativeness would be enhanced.

Definition of Terms

City Director of Vocational Education: The individual who is in charge of public vocational education programs for a school district in a city with over 100,000 inhabitants. The individual may be responsible for secondary programs or for secondary, post-secondary and adult programs.

Degree of Need Scale: A five point scale on which respondents are asked to relatively rate statements from lower to higher as to both the amount of difference between "what is" and "what should be" and the importance of reducing that difference for a city school district.

Goal Area: Short captions of each major goal which are used to organize the specific needs into goal related clusters.

Large City: A location in the United States with over 100,000 inhabitants as identified in the 1970 census and the largest location in states without a city of over 100,000.

Major Goal: A statement about a general aspect of vocational education which should be improved, expanded, or developed and is rated on a priority scale.

Higher Priority Goal: A goal whose mean rating on the priority scale is ranked among the top ten of 30 goals.

Medium Priority Goal: A goal whose mean rating on the priority scale is ranked among the middle ten of 30 goals.

Lower Priority Goal: A goal whose mean rating on the priority scale is ranked among the lowest ten of 30 goals.

Specific Need: A statement about a specific aspect of vocational education which should be improved, expanded or developed and is rated on a degree of need scale.

Higher Need: A statement whose mean rating on the degree of need scale is ranked among the highest ten of 260 statements.

Medium High Need: A statement whose mean rating on the degree of need scale is ranked among the second highest ten of 260 statements.

Medium Need: A statement whose mean rating on the degree of need scale is ranked among the third highest ten of 260 statements.

Medium Low Need: A statement whose mean rating on the degree of need scale is ranked among the fourth highest ten of 260 statements.

Lower Need: A statement whose mean rating on the degree of need scale is ranked among the fifth highest ten of 260 statements.

Priority: The sequence of a set of statements from highest to lowest based on the mean ratings resulting from a priority or degree of need scale.

Priority Scale: A three point scale on which respondents are asked to relatively rate goals from lower to higher as to their severity, urgency, and potential impact.

Rank Order: The process of sequencing a set of ratings from highest to lowest.

II. REVIEW OF THE LITERATURE

Introduction

Three bodies of literature are pertinent to this study. The first section of the review examines literature concerning urban vocational education. The purposes of this section are: (1) to provide a framework for relating this study to prior efforts and events, and (2) to build a rationale for the need to conduct a national large cities needs study.

The second section of the review examines selected literature about needs and problems in urban vocational education, vocational education, and urban education. The primary purpose of this section is to identify statements about critical needs for use in developing and validating items for the needs survey instrument used in this study.

The third section of the review examines relevant literature relating to needs assessment methodology. The purposes of this section are: (1) to review and examine the relative strengths and weaknesses of alternative needs assessment methodologies and (2) to build a rationale for the needs assessment approach used in this study.

Historical Perspective of Urban Vocational Education

A review of the past decade illustrates a growing interest in and genuine concern about vocational education in urban areas. A ten year retrospective on large city vocational education is highlighted by year below. These activities are referenced and described in more detail in the text which follows.

Year	Activity
1966	Research training institute on Priority Problems in Vocational Education for the Nation's Big Cities is held in Denver, Colorado.
1968	Council of the Great Cities Schools prepares a position paper entitled Occupational Education in the Great Cities.
1969	A seminar on "The Scope and Responsibilities of Vocational Education in Large Cities" is held in Cleveland, Ohio.
1970	A series of 20 institutes sponsored by USOE are held for vocational education personnel in eastern and western metropolitan areas.
1972	A brief analysis of Vocational Education in Major Cities comparing census and budget data from 45 cities is made by the Bureau of Adult, Vocational, and Technical Education.
1972	The American Vocational Association forms a task force to work on urban problems.
1974	Two workshops for vocational administrators in large urban areas are sponsored by the Washington, D. C. Public Schools.
1974	The National Association of Large City Directors of Vocational Education forms to address big city concerns.

Year	Activity
1974	The National Advisory Council for Vocational Education holds hearings in five large cities to identify needs.
1975	The National Association of State Directors of Vocational Education prepares a working paper on "The Role of Vocational Education in Large Cities."
1976	A Leadership Development Seminar for Large City Directors of Vocational Education is sponsored by The Center for Vocational Education.
1976	A national survey on research and development needs in vocational education is initiated by The Center for Vocational Education. Large cities' personnel are included in the sampling frame.
1976	Several interim reports on the results of the National Large Cities Vocational Educational Needs Study are presented at the meeting of the American Vocational Association, at the Leadership Development Seminar for Administrators of Vocational Education in Large Cities, and in the American Vocational Journal.

The increasing interest in large city vocational programs has grown out of the viewpoint that large cities have unique needs. Three national organizations have formed to work on major vocational education problems in urban areas. Several conferences and position papers have focused directly on the problems and needs affecting vocational education in large cities. Three prior studies of the vocational education needs in urban areas have been conducted. Since the purpose of this section is to provide a framework for relating this study to the history of urban vocational education, prior efforts to identify

needs will be briefly described. Major findings from these efforts which provide information for assessing the vocational education needs in urban areas will be presented in the section on Urban Vocational Education Needs.

National Organizations for Urban Vocational Education

The American Vocational Association (AVA) Task Force on Vocational Education in Urban Areas was organized in 1972 to address the unique needs of vocational education programs in urban areas. In December 1974, the National Association of Large City Directors of Vocational Education grew out of the AVA task force. Both organizations serve primarily as forums for city directors to discuss common problems and share workable solutions. Both organizations have made recommendations concerning the relationship of big city vocational programs to state directors of vocational education, vocational teachers, the American Vocational Association, the National Advisory Council on Vocational Education, the Vocational Education Committee of the Council of Great City Schools, publicly-funded manpower training programs, career education, urban funding and the Education Professions Development Act. (Minutes from meetings held in 1973 and 1974.) Since both organizations are relatively young and serve primarily as forums for discussion, neither organization has published position papers, research studies, or comprehensive reports on their activities to date.

An older organization, the Vocational Education Committee of Great City Schools, has published several documents about vocational education in large cities. The Council published a statement of position and critical concerns entitled Occupational Education in the Great Cities (1968) and was more recently funded to organize curriculum development in vocational education (1971).

Conferences on Urban Vocational Education

Various workshops, institutes, seminars and conferences targeted for large city vocational education personnel have also been held over the past ten years to discuss key issues in vocational education in large cities and to facilitate sharing of problem solutions among practitioners.

As early as 1966, The Center for Vocational Education sponsored a week long research training institute for vocational educators focused on the problems of big cities (Denver, Colorado, December 5-9, 1966). The Office of Education of the U. S. Department of Health, Education, and Welfare offered two major grants in support of vocational education in metropolitan areas in 1968. One grant was awarded for developing a series of institutes for the study of metropolitan areas in Western United States and the other for metropolitan areas in Eastern United States.

A series of ten separate Short Term Institutes for In-service Training of Professional Personnel Responsible for Vocational-Technical Education in Western Metropolitan Areas (Blake, 1972) were conducted in various cities of Western United States during the calendar year 1970. Colorado State University's Department of Vocational Education coordinated the institutes which were attended by 720 participants from 23 states representing 24 large cities. The main goals of the institutes were: (1) to expand knowledge of training needs of disadvantaged youth and adults, (2) to consider the problems and formulate models for implementing "career centered" education, (3) to assemble and evaluate innovative and proven techniques for providing vocational education and determine their feasibility for use with disadvantaged persons, and (4) to encourage participants to take on the role of "change agent" teams to implement institute outputs.

A second series of ten institutes for Eastern metropolitan areas were coordinated by Temple University (Olivo, 1969). According to the final report, the central focus of the entire multiple institute program was directed to the resolution of issues, forces and other constraints in the inner cities of metropolitan areas and regions of high population density which prevent policy-makers from providing realistic vocational education and training programs to meet the full range of people and demands of the labor market.

A national week long seminar focused on "The Scope of the Responsibilities of Vocational Education in Large Cities" (Mason, 1969). The report on the seminar is a compilation of the speeches delivered and evaluation of workshop sessions. About one-third of the 90 seminar participants responded to a six month follow-up questionnaire about the utility of the seminar. Most of the respondents reported the seminar had assisted them in identifying and analyzing problems confronting vocational education, exchanging ideas, and examining trends to make vocational education more effective. More programs for the disadvantaged and an expansion of work study programs were listed most frequently as evidence of action resulting from the seminar.

Two workshops for administrators of vocational education programs in large urban areas were sponsored by the Division of Career Development Programs of the D. C. Public Schools (November 1974 and April 1974) through Federal Education Professions Development Act (EPDA) funds. The major thrusts of the workshops were: current status of vocational education legislation, needs assessment, planning and evaluation, articulation among the incompatible components of the American educational system, career education, use of advisory councils, image of vocational education, the Comprehensive Employment and Training Act, and innovation in large cities.

At the National Leadership Development Seminar for State Directors of Vocational Education held in September 1975, three position papers on the "Role of Vocational Education in Large Cities" were presented (Healas; Hobbs; and Bins, 1975). A synthesis paper concerning the state directors position about the role of vocational education in large cities was also prepared.

In 1976, a Leadership Development Seminar for Administrators of Vocational Education in Large Cities was sponsored by CVE. The major topics at the seminar were: the context of vocational education in large cities; the role of the city director in curriculum development; the role of the city director in instructional improvement; the role of the city director in personnel development for leadership; and the role of the city director in influencing policies, decisions, and top management. Another national seminar for large city vocational education personnel is currently being planned by CVE for 1977.

Urban Vocational Education Need Studies

Several national studies have focused directly on urban vocational education needs. The National Advisory Council for Vocational Education studied educational needs in five large cities (1974). The Bureau of Adult and Occupational Education studied educational needs in 45 large cities (1972). The Center for Vocational Education

conducted a national study of research and development needs for all vocational education, including the urban dimension (Morrison, et al, 1976).

Although these three recent attempts have been made to identify vocational education needs at a national level, none of the studies provide comprehensive, current and valid information about urban vocational education needs as explained below. The National Advisory Council study (1974) used subjective information about current major problems in vocational education collected informally from citizens and vocational educators in five major cities. Hearings were held in Washington, D. C., Pittsburgh, Atlanta, Los Angeles, and Houston. Perceptions of critical needs were voiced in each city by educators, businessmen, labor union representatives, and the general public.

The major strengths of the National Advisory Council study are: (1) collection of information from a variety of vocational education participants, (2) collection of information through personal, face to face contact, and (3) use of an unstructured approach so that a wide variety of concerns could be expressed. The major weaknesses of the study are: (1) lack of a representative sample for generalizing to all large cities, since only five cities were studied, (2) collection of information based entirely on individuals' subjective testimonials, and (3)

collection of information at a highly general level which does not provide sufficient direction for planning future vocational education programs.

The Bureau of Adult and Occupational Education (BAOE) in the United States Office of Education prepared a summary of vocational education in major cities based on budgetary data for fiscal year 1971 data and demographic data from the 1970 census. The report, "Vocational Education in Major Cities" (1972) made a brief analysis of major city vocational education data from 45 cities as related to the total state population and vocational education enrollment, program completions, teachers, teacher training, and expenditures. The BAOE study, although national in scope and based on empirical data, does not provide current information about vocational education needs, focused on a limited range of problem areas, and used a narrow data base to draw conclusions.

The Center for Vocational Education (CVE) has recently conducted a National Survey of Vocational Education Needs (Morrison, et al., 1976). The CVE needs study focused on the research and development needs for all vocational education, including the urban dimension. There was co-ordination between the National Survey of Vocational Education Needs and the National Large Cities Vocational Education Needs Study in both the selection of items and rating scales to be used. However, the National Survey of Vocational Education Needs focuses on the needs of a

much broader population than large city vocational educators. In the CVE study, information was collected from: state directors of vocational education, research coordinating unit directors, state directors for community and junior colleges, executive secretaries for state advisory councils, and directors of state instructional materials laboratories. Consequently, the results from the CVE study are useful for comparing the needs of large cities to national needs but do not provide an adequate source of information about large cities.

Several local needs assessments have been conducted in large cities to identify vocational education needs. In Nashville, Tennessee, an assessment of employment demands and interests for Nashville-Davidson County Metropolitan Public Schools was conducted (Gray, et al, 1975). The purpose of the Nashville study was to: (1) identify potential employment opportunities for students, (2) identify students and parents' needs for vocational education programming, and (3) to interpret the information as a plan for the reorganization and expansion of the city's vocational education programs. A similar study was recently conducted in Baltimore for the Baltimore City Public Schools (Koble, et al, 1976). A third local needs assessment which has been patterned after the National Large Cities Vocational Education Needs Study is currently being conducted in the large cities of Oklahoma, Oklahoma City and Tulsa (Koble, et al, 1976).

Summary

Beginning efforts have been made nationally and at the state and local levels to identify and systematically work on needs in urban vocational education. However, existing efforts are either incomplete or lack depth in their exploration of large cities unique problems. Support for a national study of urban vocational education needs can be drawn both from the growth of interest in urban vocational education and the lack of systematic studies of their needs.

Needs in Urban Vocational Education, Vocational Education, and Urban Education

A review of literature to identify some of the critical needs and problems affecting urban vocational education programs was conducted. Needs identified through a search of relevant literature were used to develop and validate items for the needs survey instrument used in this study. Three general categories of literature were reviewed to identify needs: studies of urban vocational education, studies of vocational education, and studies of urban education. The types of literature which were reviewed to identify and validate needs included: reports by national agencies; research studies; and position papers, essays, and synthesis documents. National agencies, such as the Bureau of Occupational and Adult Education, the National Advisory Council on Vocational Education, and the General Accounting Office, often conduct investigations to set

funding priorities, make policy recommendations, or formulate laws. National investigations may include the assemblage of statistics from standard sources, holding hearings with constituents, and/or consulting experts and professional groups.

A second class of literature, research studies, is characterized by the systematic collection and analysis of data to assess some aspect of vocational or urban education. Often, these studies led the investigators to describe problems or needs and to recommend solutions.

A third type of literature reports on various aspects of vocational or urban education without the collection of new data. These reports include literature reviews and syntheses, task force reports, essays, and position papers. Frequently, authors of these documents drew conclusions about needs, problems, and priority goals for vocational or urban education. Selected documents of these three types were reviewed. Highlights of the needs and problems which were identified through the review are presented in this section. The needs are organized by content into three subsections: (1) urban vocational education needs, (2) vocational education needs; and (3) urban education needs.

Urban Vocational Education Needs

As mentioned earlier, two national agencies have directly studied urban vocational education needs. In hearings held by the National Advisory Council for Vocational Education in five large cities, several concerns which were common across all five cities were identified (Report on Urban Education, 1974). For example:

1. There is a great need to expand vocational education in major cities. The demand for trained people in specified fields with special abilities to communicate with inner-urban students is greater than can be met with current faculty and facilities.

2. This expansion and improvement of center-city vocational programs requires increased funding.

3. There is a need to build more relevance into vocational courses. Too many students are trained in fields where there are few jobs, and the system is too slow in updating course content and adding courses in new fields.

4. There needs to be an increase in the coordination of cooperative efforts between educators and the business, industry and labor communities.

5. There is a general need for more and better counseling and the development of effective job placement programs.

6. Although the image of vocational education is improving, this is a need to help parents, academic teachers, and administrators trancend the assumption that all students should enroll in academically-oriented four year post-secondary institutions.

7. There is a need to maximize the efficiency of the city-wide system through utilization of the resources of the private schools.

8. There is a need to address the problems of sex and race discrimination in career counseling, training and job placement.

9. There is a need to provide vocational training to handicapped students.

The Bureau of Occupational and Adult Education identified the following problems when they compiled statistical data from 45 large cities and compared them to state statistics (Vocational Education in Major Cities, 1972).

1. The enrollment in vocational education programs in 24 major cities fell behind the expected enrollment for the size of the population.

2. Thirty-two cities spent less of the state's total funds than their enrollment indicated they should receive.

3. Twenty-three cities had a higher percentage of disadvantaged and 12 cities had a higher percentage of handicapped than the state's total enrollment of handicapped and disadvantaged. The level of funding generally lagged behind the level of enrollment for the disadvantaged and handicapped.

Vocational Education Needs

Two reports by national agencies about the general research and development needs of vocational education were reviewed. The Bureau of Occupational and Adult Education (BOAE) identifies priorities for vocational education for each funding year through consultations with vocational practitioners and researchers. The priorities for FY 75 (Federal Register, 1974) and the priorities for FY 76 (Federal Register, 1975) focus on: state administration of vocational education; local administration of vocational education; comprehensive systems of guidance, counseling placement, and follow-through services; curriculum demonstration and installation; adult vocational education; post-secondary

vocational education; individualization and modularization of instructional materials; and special needs populations.

The Center for Vocational Education, as a national research and development center for vocational education, used expert opinion and consultation to identify programmatic priorities in areas of perceived need for vocational education. The CVE Program Priorities (1970 revised 1976) describe research and development needs across all of vocational education, but also provides information which is pertinent to large cities. The CVE program priorities focus on concerns such as the relevance of vocational curriculum; personnel development opportunities; vocational programs for occupationally disadvantaged persons; vocational guidance; the diffusion of new ideas in vocational education and leadership and management.

Several vocational education research studies were used to identify needs. These included: reports of project baseline (Ellis, 1975; Lee, 1974); the CVE studies of information needs (McCracken, 1973; McCracken and Gillespie, 1973); the study of the role of secondary schools in the preparation of youth for employment Kaufman and Schaefer, 1976) and the longitudinal study of the contributions of vocational education, training and work experience to career achievement (Grasso, 1975).

Urban Education Needs

Literature from urban education gives insight into needs resulting from the urban context in which large city vocational education programs operate. In their final report, the Task Force on Urban Education identified many problems common to urban education (Riles, 1970). The financial crisis of urban schools was viewed as the number one problem. The report documented several factors from which urban financial problems stem, such as:

1. financial deterioration due to population migration and loss of business and industry
2. higher cost of urban education because of higher service costs in cities and more costly special educational needs of the high proportion of poor, blacks, handicapped, and immigrant students in cities
3. inequitable state aid formulas which do not offset the disparities between central city, suburban, and rural educational costs and spending
4. dwindling public confidence in education which is accelerated by disruptive activities, such as busing, teacher strikes and school violence
5. minimal effectiveness of Federal aid to urban areas due to low levels of aid, uncertainty about levels and availability of funds, inequitable distribution of funds, cumbersome administrative procedures, and lack of national resource allocation priorities based on needs.

The task force on urban education also investigated other general problems within the urban education system. Some of the more critical problems expressed in the report were:

1. shortages of textbooks and supplies
2. overcrowded facilities
3. outdated, poorly maintained facilities
4. teacher shortages in some important content areas (e.g., industrial arts, special education, mathematics)
5. large class sizes
6. lack of fully accredited teachers
7. teachers who are unsuccessful in relating to and inspiring their students to learn
8. teacher dropout
9. low student competence in basic academic skills
10. high student dropout rates
11. student hostility toward the educational system which is expressed through vandalism, violence, and absenteeism
12. teachers who are personally and economically dissatisfied with their jobs

In a review and synthesis of many urban education studies and papers, Hummel and Nagle (1973) expanded the list of critical urban education problems to include:

1. student use of narcotics
2. lack of relevance of the school curriculum to the lives of urban youth
3. lack of employment opportunities for inner city graduates
4. the enormous size of urban school systems which intensifies depersonalization and bureaucracy
5. racial and socioeconomic segregation

After a comprehensive study of the public schools of Washington, D. C., Passow (1964) concluded that two critical problems were lack of teacher involvement in the community where the school is located and lack of parental involvement in school activities.

The research division of the National Education Association (1968) conducted a nationwide survey of problems confronting teachers in urban, rural and suburban areas. The following problems were among the most often cited in urban areas: (1) insufficient time for rest and lesson preparation during the school day; (2) classroom management and discipline problems; (3) inadequate assistance from specialized teachers and (4) ineffective testing and guidance program.

Cunningham and Nystrand (1969) found a shortage of administrative personnel who are skilled in dealing with the complexity of managing urban education.

Summary

In this section of the review of literature, selected documents from some of the many sources of information available about urban education, vocational education, and urban vocational education have been reviewed. The purpose of the section was not to provide a comprehensive review of these three bodies of literature but rather to highlight information which has special relevance to

identifying needs in large city vocational education programs. The areas of need identified through this review were used in developing and validating items for the survey instrument. This process is further explained in the following chapter on procedures.

Needs Assessment Methodology

Since the 70's began, there has been a tremendous spurt of development in needs assessment models, procedures, and instruments. Many educational agencies have initiated systematic studies of their needs. A comprehensive review of needs assessment literature prepared by Witkins (May 1975) listed 14 separate needs assessment models and general instruments available for commercial use that have been developed since 1970. Over 30 needs assessment studies accomplished since 1970 are mentioned by either Witkins, or by Holden (March 1975) in another review of needs assessments. Many other groups have analyzed needs using packaged kits from sources such as the Center for the Study of Evaluation and Phi Delta Kappa.

Needs assessments are most typically conducted by school districts. But studies have also been conducted to assess the needs of universities, states, regions, the nation, individual schools, specific educational programs, and classrooms. Most needs assessment procedures are applicable in various types of settings for multi-purposes. As the press for programs based on needs continues to increase, many educational agencies requesting Federal funds must justify their requests with comprehensive needs assessment data. Since the passage of the Elementary and Secondary Education Act of 1965, this is the case for schools wishing to apply for grants under the competitive

titles of the Act, particularly ESEA, Title III (innovative programs). Although the flury of needs assessment models and studies are a fairly recent phenomena, the concept of educational need has been heavily worked in educational literature and used to justify educational programs since the 1950's.

R. D. Archambault assembled a multitude of examples in The Harvard Educational Review in 1957, showing how "need" is coming to be relied on to settle all sorts of questions in education. Drearden (1956) purports that "the concept of need is an attractive one in education because it seems to offer an escape from arguments about value by means of a straightforward appeal to the facts, empirically determined by experts" . . . Drearden goes on to say that this line of reasoning is fallacious since "value judgments are inescapable in determining needs."

Smith (1960) asserts that use of the term "need" is in a confused state since "need" can have so many different meanings. His analyses reveal the term is primarily used in two ways. The first is a prescriptive use. The second is a motivational use. A prescriptive use of the "need" may be to: (1) specify some further state of affairs ("He needs to develop skills.") (2) describe a necessity ("Candidates for graduation need 20 credits.") or (3) allude to a lack of deficiency ("She needs a college education"). A motivational use of "need" may be:

(1) as an inclusive term to embrace drives, impulses, goals set, urges, motive, cravings, desires, wants, and wishes (need for recognition, affection, achievement, etc.) or (2) to refer to deviations from the norm or the absence of conditions necessary for achieving the end state (survival, comfort, etc.). Smith goes on to say that "the needs concept has been made to carry a heavy theoretical load in many areas of education. But depending on the way 'need' is interpreted, the general proposal that schools meet students' needs turns out to be sometimes trivial, sometimes indeterminate and sometimes unsupported but always unimportant."

Over the years, other authors in education and psychology have defined need in various ways. Some definitions of need from the natural systems or psychological perspective are:

> A need must always be both personal and social in reference; it must always incorporate both the present desires of the individual and what they should desirably become. (Thayer, et al., 1939)
>
> A need exists as a state of tension in a person which serves to direct his behaviors toward certain goals. (Gates, 1948)
>
> Anything that is requisite to the maintenance of a state of affairs is a need. (Woodruff, 1951)
>
> A need is something that, if present, would further the welfare of the individual. (Beck, et al., 1953)
>
> A need is a persistent and recurrent want. (Cronbach, 1955)

> Need is something not only that without which the organism will perish but also that the organism will want and therefore pursue. (Olds, 1955)
>
> Need is a condition which calls for action toward a certain goal. (Stephens, 1956)
>
> A need is a lack, want, demand or desire felt by an individual or a social group. (Hall, 1962)

Some definitions of need from the man made system or educational perspective are:

> A need is the absolute and relative gap between a goal and evidence of programmatic effort and programmatic outcome. (Woodbury, et al, 1970)
>
> A need is the discrepancy between actual and desired performance. (Provus, 1971)
>
> A need is an unbalance between student benefits and costs. (Sweigert, 1971)
>
> A need is the situation that exists when actual learner performance is below that which is desired. (EPIC, 1972)
>
> A need is the difference between desired learner outcomes and current learner status. (Popham, 1972)
>
> A need is something useful, required or desired that is lacking. (Webster, 1972 edition)

Probably the most commonly accepted concept of a need by educators is that originated by Kaufman who defines a need as the "measurable discrepancy between current outcomes and desired or required outcomes." A need has also been called "the discrepancy between what is and what ought to be." (Kaufman, 1968).

Even those authors who accept a discrepancy definition of a need, approach the term from different points of view. Some authors feel that a need must refer to students' knowledge, attitudes and behaviors. Others feel that

institutional needs are also acceptable. Needs are sometimes viewed as important goals which are not being adequately achieved and conversely as critical problems which are important to resolve.

There is no one generally accepted "model" of needs assessment. Needs assessment is most typically viewed as a systematic procedure for finding out where the greatest discrepancies are between important goals of education and the present status of educational programs. Within this general framework there is extensive variety of needs assessment models, procedures, and instruments. Needs assessment may use objective information or subjective information. The reference group for the needs assessment may be the three recommended by Swigert (1971), educators, students, and patrons of the educational system or they may seek the perceptions of only one of these groups. Student needs or institutional needs may be the focus of the needs assessment.

The reasons for doing needs assessment are many: (1) to make better decisions for educational planning, (2) to be more accountable to students, parents, and taxpayers, (3) to assign priorities to greatest areas of need so that time, people, and dollars can be used in the most productive way, and (4) to improve public relations by involving the non-school community in goal setting.

In this section of the review of the literature, varied approaches for assessing educational needs which have been developed since 1970 will be reviewed. Their relative strengths and weaknesses will be summarized for the purpose of building a rationale for the needs assessment methodology used in this study.

Existing approaches to needs assessment can be roughly divided into six categories or types: (1) objective discrepancy analysis, (2) subjective discrepancy analysis, (3) self-perceived needs discrepancy analysis, (4) interactive needs assessment, (5) objective needs assessment, and (6) subjective needs assessment. Although there is some overlap between these six categories and many other possible organization schemes, this scheme provides a useful framework for discussing the relative strengths and weaknesses of some key features of various needs assessment approaches. In this section of the review of the literature, each of the methodologies are described, several examples are given, and their advantages and disadvantages are discussed.

Objective Discrepancy Analysis

The most widely implemented approach to needs assessment uses objective measures of the performance of students or programs through specific tests. This approach can be called an Objective Discrepancy Analysis (ODA). The type of objective measures of student performance which are used may include standardized tests, criterion referenced

locally developed tests, or student work. The most typical procedures which are followed when using the ODA approach are: (1) to determine the relative importance or desired status of a set of educational goals using input from students educators and community members; (2) to determine the actual status of student achievement in the areas which are selected as most important using objective tests, and (3) to compare actual status with desired status to determine high priority educational needs. Several needs assessment models and studies which used the ODA approach are described below.

The Center for the Study of Evaluation developed a guidebook and kit of material for conducting needs assessments entitled the CSE Elementary School Evaluation Kit: Needs Assessment (Hoepfner, 1972). The kit provides a group of educational goals listed on packs of goal cards. Reference groups are asked to rate the goals from unimportant to most important using a card set. Tests and questionnaires are used to measure the attainment of the most important goals. A test evaluation system, comprised of four evaluation criteria (measurement, validity, examinee appropriateness, administrative usability, and normed excellence) is used to select the best instrument available to assess student performance. Test results are interpreted in relation to those of other schools with similar characteristics. A decision model is used to transform

the information into a set of critical need areas for the school. The CSE model was field tested in a national sample of 79 schools and a California sample of 100 schools.

Educational Systems Associates (Read, 1974) provides guidelines for conducting a needs assessment which includes: (1) a survey of perceived needs using discrepancy ratings on goals, (2) an analysis of secondary sources, and (3) the direct measurement of existing status. Both learner and process-oriented goals and objectives are used.

The Worldwide Educational and Research Institute needs assessment model, developed as Project Next Step (Eastmond, 1974), provides a complete guide for a systems approach to needs assessment and program planning. It does not include lists of goals or survey instruments. Instead, it describes a needs assessment process through 10 manuals which include flow charts, examples of instruments, and specific guidelines. The central feature of the model is "concerns analysis," a method for integrating perceptions with test scores needs. Facts, policies, and value are compared to arrive at statements of validated needs. The model provides guidelines for using both educational and community; and both individual and group judgments.

In Oklahoma City (1973-74) a Q-sort technique was used by patrons, staff, and students to rank the importance of 31 skills and attitudes that students should develop.

The current status concerning the most improtant of these skills and attitudes was determined through achievement test data, parent-teacher conference forms, student self-reports, teacher reports, teacher-made tests and other measures. A panel used this information to determine the degree of discrepancy between what is and what should be and to recommend the highest priority needs.

In Las Vegas, Nevada (Clark County School District, 1975), the Department of Educational Research obtained a comprehensive listing of goals from the school district and asked parents, teachers, students, and administrators to rate their relative importance. Again, data were collected to determine actual student performance concerning the goals through achievement tests, survey instruments, and documents such as letters, speeches, etc. After computing discrepancies between actual and expected student performance, goals were ranked in order of priority

The Division of Planning and Evaluation at the Ohio Department of Education has issued Needs Assessment Guidelines (Lewis, 1973). Step by step guidelines are provided for determining: (1) perceived educational needs and their priority, (2) actual status of student achievement in priority areas, and (3) comparing actual status with desired levels to determine high priority educational needs. The guidelines are currently being tested in ten school districts.

Some advantages of Objective Discrepancy Analysis are:

1. Objective data concerning student performance have more validity and credibility than subjective data.

2. Data are readily quantifiable.

3. If norm-referenced tests are used, data can be easily compared over time or compared with other programs. Groups of students may also be easily compared.

Some disadvantages of Objective Discrepancy Analysis are

1. Mathematically, the computation of discrepancy scores requires that both the "what is" and "what should be" dimensions are measured in a comparable way. If test scores are collected for the "what is" dimension and a Likert scale is used for the "what should be dimension," the test data must be converted to a Likert-type scale to make comparisons possible. Error is likely to result in this conversion process.

2. Test norms may not be appropriate for a given population.

3. Tests may be inappropriate for the goal used.

4. Use of objective test limits the variety of types of needs on which information can be collected since most tests reflect only cognitive achievement.

Subjective Discrepancy Analysis

A second class of needs assessment methods can be titled Subjective Discrepancy Analysis (SDA). The SDA approach to needs assessment uses only subjective information about "what is" and "what should be" to determine needs. SDA relies on the perceptions of reference groups concerning the actual status of student or program achievement rather than on objective data. Several examples of the SDA approach are described below.

Batelle's Center for Improved Education (Hamilton, 1972) has developed a set of four needs assessment surveys suitable for the secondary level to collect information from parents, students, staff, and the community at large. Each survey contains goal statements which are rated on two five point scales. On one scale, respondents rate their perception of the "actual state" or the extent to which the condition actually exists. On the other scale, respondents rate their perception of the "desired state" or the extent to which the condition whould exist. The numerical differences between the two scale values or need indices are arranged in order of magnitude. Batelle (1973) has also developed a set of surveys for community colleges similar to those available for local districts. Surveys have been developed for students, faculty, support staff, administrators, and board members. The items are classified under 12 areas of education management: goals, communicating, participative decision making, planning, evaluating, instructing, staff development, managing personnel relations, managing resources and materials, guidance, student services and community services. Two scales are used to rate current status and desired status for each item. The resulting discrepancies are used to prioritize the items.

The Phi Delta Kappa (PDK) needs assessment model (Rose, 1973) is distributed nationally through 23 training and dissemination centers. The PDK model has three phases:

(1) rating goals for importance and degree of attainment, (2) setting objectives based on high priority rankings, and (3) developing performance objectives and plans for implementation. In phase one, the goal rating process uses a type of card sort involving educators and citizens individually and in small groups. The importance of 18 goal statements are rated through a semi-forced choice procedure on a five-point scale. Goals are first rated individually by both educators and representative community members, then consensus rankings are arrived at in small group sessions. A second 15 point scale is used to rate how well the current school programs are meeting each goal. The outcome of the procedure is a priority listing of goals based on judgmental discrepancy data. Objective data can also be collected to validate the perceptual ratings.

Westinghouse Learning Corporation (1973) has developed a preprinted survey questionnaire consisting of 50 general goal statements for secondary education worded in terms of student skills, knowledge or attitudes. The goals are rated on three scales: (1) a five point scale of importance, (2) a three-point scale of adequacy of attainment, and (3) a five-point scale of extent of the school's responsibility for the goal. A formula is used to arrive at priorities which includes the three ratings as illustrated below.

$$\text{Priority ranking of needs} = \frac{\text{Importance} \times \text{Responsibility}}{\text{Attainment}}$$

The same instrument can be used by both educators and community members. The outcome of the assessment process is a summary ranking of the goals according to needs. In addition, comparisons among client groups and separate rankings according to importance, attainment, and school responsibility can be derived for each respondent group.

Educational Testing Service has developed the Institutional Goals Inventory (1974) to help colleges and universities establish priorities. The preprinted instrument contains statements of student outcomes in cognitive and affective areas and process goals about campus climate and education. Respondents rate the goals as they exist on campus and as they would like them to exist in two five-point scales. The same instrument can be used with students, faculty, administrators, citizens, legislators, or trustees.

Some advantages of Subjective Discrepancy Analysis are:

1. It is easy to compare "what is" with "what should be" since similar scales are used.
2. It is easy to compare the perceptions of different groups on both the "what is" and "what should be" dimensions since similar rating scales are used.
3. Perceptual information about "what is" is valid data of a kind and may be the type of information which is sought.

Some disadvantages of Subjective Discrepancy Analysis are:

1. Perceptual information about "what is" may not reflect the actual situation since individuals have varying standards of perfection and may lack accurate and complete knowledge about the status of many areas.

2. If sampling is inadequate, results will be biased.

3. Ease of quantifying may obscure invalid data.

4. The approach is so "cut and dry" that it tends to oversimplify the problems.

Self-Perceived Needs Discrepancy Analysis

A third general class of needs assessment methods is very closely related to the subjective approach described above. However, the Self-Perceived Needs Discrepancy Approach (SPNDA) is unique in that it uses respondents' self-assessment of their own skills rather than their assessment of the actual status of an entire educational program. Typically, this approach uses "what is" information only from students who may rate the frequency with which they perform a particular activity or their felt level of skill in a particular area. SPNDA uses subjective ratings as in the previously described method but the ratings are more credible in that responses are limited to self ratings. Some examples of SPNDA are highlighted below.

The Pupil-Perceived Needs Assessment (PPNA) kit developed by Research for Better Schools (DeLorne, 1974) provides procedures to assess the perceptions of need by students at any grade level. The kit contains no ready-made instruments but provides a cassette tape and six booklets

for instruction in: (1) planning a PPNA project, (2) developing PPNA indicators, (3) administering the indicator, (4) processing data, (5) analyzing and reporting results, and (6) sampling.

Alameda County Public Schools (Alameda, 1978) developed a general needs assessment instrument based upon the five goals for quality education in Pennsylvania and two specific instruments, one instrument for each of the goals. The general goals are rated on a five point scale of importance by parents, students, teachers or administrators. The specific instruments are self-assessments on which students rate themselves on specific behavioral items on a five point scale of frequency. The goal statements and behaviors used in the instrument were derived from an empirical study using the Critical Incident technique. It is not clear how the results from general and specific instruments are to be related.

The Alameda County Needs Assessment Model (Alameda, 1978) was developed to help elementary schools in California to assess needs as a basis for applications to the state educational agency for funding. It consists of [illegible] questionnaires and a [illegible] manual. The [illegible] school [illegible] the motivation and [illegible] [illegible] [illegible]

on pupils' knowledge, skills, and attitudes in reading, language development, mathematics, and multicultural education. Questions for parents and staff relate to input and process variables concerning the instructional areas. Survey data are summarized to assess the program goals, the discrepancy between the degree of importance and the degree of satisfaction, the objectives, the activities, and the timelines for instructional and support components.

Some advantages of the Self-Perceived Needs Discrepancy Analysis approach are:

1. The technique has the advantage of more valid "what is" information yet retains comparable rating scales for easy analysis.

2. The technique can be used in a diagnostic manner with individual students as well as to determine general program needs.

Some disadvantages of the Self-Perceived Needs Discrepancy Analysis approach are:

1. The approach is limited to student needs.

2. Perceptual information may be invalid due to the reasons discussed in the Discrepancy Analysis section.

Interaction Needs Assessment

A fourth type of needs assessment procedure was called Interaction Needs Assessment (INA). Interaction Needs Assessment is characterized by the systematic investigation of conditions at different points in time. This approach may use needs assessment conditions representing the various components of the educational system to develop goals. The INA approach may begin

with elicitation of problems through an instructional interview, open ended questionnaire, or critical incident technique. Once a list of goals has been developed through the INA approach, their importance and current status are usually determined using one of the other approaches to needs assessment described in this section. Some examples of the INA approach are illustrated in this section.

The Dallas Independent School District (Dunough, 1974) uses needs assessment as part of the annual budgeting process. Each year a 600 member committee made up of students, teachers, parents, community members, principals and central office staff give their perception of present and desired conditions in the district. Areas of instruction, classroom operation and management, services for students, school management, and development services are rated on a 15 point scale. The results show priority areas, areas of greatest difference between present and desired conditions, and composite rankings of priorities and greatest different areas. Results are used by program managers to select goals to be worked on during the year.

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agency. The study includes: (1) interviews with a stratified sample of 8,000 potential uses of educational services, (2) mail surveys to all businesses and industries employing more than five people, and (3) a survey of all agencies serving adults.

The New Jersey State Department (1972) has determined a set of goals for the state, ranked them in a series of statewide conferences, and collected public opinions on educational goals through personal interviews with over 1,000 residents. The state department then determined the current status of high importance goals.

Some advantages of Interactive Needs Assessment are:

1. Involvement of constituents generates more interest in and commitment to the study and may facilitate increased use of the study's results.

2. Two-way communication facilities the development of goal statements or uncovering of problems which may have "slipped through the cracks" without interaction.

3. "Field initiated" goal statements may word ideas in a way which communicate more effectively to community members, practioners and students.

Some disadvantages of Interactive Needs Assessment are:

1. It is time consuming.

2. The impetus for needs assessment may be dissipated if the process is long.

3. Goals may be inconsistently stated or confused with solutions and problems.

4. A lot of time may be spent "reinventing the wheel."

Objective Needs Assessment

A fifth type of needs assessment method uses only objective information to assess needs. This type is called Objective Needs Assessment. In this approach needs are inferred from objective data but there are no systematic procedures for determining needs. For example, this approach might use Bureau of Labor Statistics job market forecasts and current employment patterns for graduating vocational students to infer needed changes in vocational curriculum offerings. Or statistical budgetary and demographic data could be compared over time; for states and cities; or for urban and rural areas to infer needed changes based on inequities. Two examples of an Objective Needs Assessment are described briefly below.

The Florida Community Colleges Consortium developed a model (Breuder, 1974) to compare community needs, including occupational needs for the service areas of the community college, to the college curriculum. Identifying community's educational needs was part of a systematic process for developing plans to meet important needs, allocating budgets to priority areas, determining economic feasibility of fulfilling the need, and continually evaluating the educational system's effectiveness in meeting community needs. The model uses a computerized process for analyzing data such as: (1) reports of jobs requested through the Florida State Employment Service in occupational

areas related to the community colleges' service areas; (2) Bureau of Labor Statistics labor market forecasts; (3) census data on demographic characteristics, and (4) local community business and industry employment reports. Results of the analysis provide a list of jobs in priority order for which employees are needed and has provisions for relating this information to people training for jobs, people needing jobs, and people in jobs. Results can be used to modify the curriculum to better meet job market demands.

The Florida State Department (Kurth, 1971) assessed needs at a statewide level through: (1) a survey of educational practices and learner characteristics from a random sample of schools, (2) a sample of opinions of seven population groups, including employers of former students and (3) demographic data. Florida is currently field testing a detailed needs assessment system (Knight, 1974) which is intended to help local districts assess their needs. Current development efforts include: (1) a needs assessment system, (2) a training program to prepare users of the system, and (3) a cadre of trained State Department of Education personnel to provide technical assistance.

Some advantages of Objective Needs Assessment are:

1. For certain types of questions, objective data which is compared over time, against standards, or across demographic variables may be sufficient

for deriving needs. However, it should be noted that some basis of comparison (e.g., over time, across programs, etc.) is necessary for objective data to be used to identify needs.

2. Objective data may be compiled from existing sources without the collection of new data.

Some disadvantages of Objective Needs Assessment are:

1. Unless careful thought is given to exactly how the results of the study will be used at the outset, it is likely that excessive data will be collected.

2. The data is more open to various interpretations. Needs may be derived differently depending on how the data is viewed.

Subjective Needs Assessment

A sixth and final classification of needs assessment models can be titled Subjective Needs Assessment (SNA). In this approach, perceived needs are measured directly on one scale through asking respondents to either rate the relative priority of a group of need statements; to decide whether they agree or disagree with a statement, to indicate whether they favor or oppose a certain practice or a similar type of direct rating procedure.

An example of the SNA approach is a questionnaire for assessing needs of students in community and junior colleges which has been developed by Educational Testing Services (1973). The 150 item questionnaire includes items about the processes of instruction, program planning, administrative affairs, and out of class activities. The scales vary with the item and include: favor/oppose a certain practice; frequency of occurrence of an event, and agreement/disagreement with a statement.

Some advantages of the Subjective Needs Assessment approach are:

1. Use of only one rating scale makes this approach the easiest to complete, analyze, and report.

2. Since the process of setting priorities is shortened, more time can be allowed for program planning and taking action in high priority areas.

A disadvantage of the Subjective Needs Assessment approach is:

If this approach merely assigns priorities to goals rated highest in importance, it is not truly a needs assessment since a goal is not the same as a need.

Summary of Disadvantages and Limitations of Available Needs Assessment Approaches

Some general disadvantages and weaknesses inherent in most approaches to needs assessment are listed below.

1. Needs assessments often result in a list of general educational goals in priority order. The goals are often so general that they do not provide sufficient direction for follow-up action.

2. If ratings of goals are collected from several groups of individuals (parents, students and educators for example), the results from each group frequently differ widely. Overall results are consequently often unclear with one group cancelling out another.

3. If goals are rated on a five point Likert scale, the means for most of the goal tend to end up in a fairly narrow middle range from 2.5 to 3.5. This makes it difficult and arbitrary to distinguish the relative priority of the goals.

The most popular approach to assessing needs, discrepancy analysis, has some distinct disadvantages.

1. The process is time consuming if the ratings on current status and desired status are sought through separate surveys. The response rate will also tend to be lower with two surveys.

2. Perceptual information on current status of "what is" tends to be invalid since individuals have varying standards of perfection and may lack accurate knowledge about the status of many areas.

3. If ratings on current and desired status are collected at the same time to save time, the process tends to have low face validity for most respondents. Rating each item on two dimensions becomes frustrating. Distinctions between the two dimensions often seem arbitrary to respondents who may have insufficient knowledge and lack strong opinion for making fine discriminations.

4. If the ratings on either dimensions are invalid, the discrepancy scores will be invalid. Even if both data sets have reasonably high validity, the discrepancy scores will magnify any existing error.

5. Discrepancy scores require that both dimensions are measured in a comparable way. It is not methematically possible to compare test scores with Likert scales. If test scores or other empirical data is converted to a likert scale measurement, some error results.

6. Discrepancy scores are clumsy to communicate, both to respondents and to the general public.

III. PROCEDURES

Introduction

The needs assessment approach used in this study is a modification of discrepancy analysis. In discrepancy analysis, measuring a need requires at least three steps: (1) determining the current outcomes, (2) determining the desired or required outcomes, and (3) determining the amount of discrepancy between current and desired outcomes. Other researchers have added a fourth step, rating the importance of reducing each discrepancy (Edge, 1973; Lange, 1974).

The basic approach to needs assessment used in this study is a combination of interactive needs assessment and subjective discrepancy analysis as defined in Chapter II. The steps for measuring needs were: (1) determining major problems, (2) determining major goals, (3) develop need statements based on discrepancies between problems and goals, and (4) determining the relative degree of need of the set of needs. Some unique features of the approach used in this study are: (1) maximum involvement of respondents in developing need statements, (2) comparing descriptive information about major problems and goals to determine

discrepancies, (3) delimiting the focus of the study at the outset to major problem areas, (4) collecting both general and specific information about needs, and (5) using only one scale to measure the relative priority of needs.

Maximum Involvement

Maximum involvement from urban vocational educators, students, and citizens was sought in the development of need statements. Open-ended surveys and personal interviews were used to explore important problems and goals for urban vocational education. An interactive approach for developing need statements was used because: (1) an accurate and comprehensive literature base on needs in urban vocational education was not available, and (2) participant involvement would facilitate use of the study's results by maximizing the legitimacy and useability of the results for urban vocational educators. Speiss (1973) found that the utilization of evaluation conclusions in decision making is impacted on by both the decision maker's ability to interpret the evaluators' implications for action and the extent to which the legitimacy of the evaluation is accepted by the decision maker.

Developing Need Statements

Rather than collecting information about what is and what should be in urban vocational education, descriptive information about major problem areas and goals related to these problems was collected. Problems and goals were compared and synthesized into statements of need.

Delimiting the Focus to Major Problems

Rather than collecting information about needs in all aspects of urban vocational education, a sequential funneling process was used to delimit the need statements to high priority areas. The first funneling of all possible needs occurred in the exploration stage of the study when only discrepancies perceived as priority problem areas by practicing vocational educators received focus. A second funneling occurred after the initial need statements were developed. A group of 45 reviewers including large city vocational directors, research specialists in vocational education, and graduate students were asked to review the statements and recommend deleting statements which did not reflect high priority concerns.

Collecting Both General and Specific Information About Needs

Typically, needs assessments provide information about only very general goals of education. In this study, information was collected about both general and specific areas of need. The specific information about needs can be more easily translated into action. The general

information can be used for major policy and funding decisions. This increases the potential utility of the information.

Using One Scale

After needs statements were developed using information about major problems and goals, the relative priority of the needs was assessed using one "degree of need" scale. Degree of need was defined as "the amount of difference between what is and what should be and the importance of reducing that difference." Other subjective discrepancy analyses approaches to needs assessment typically use two rating scales, one scale to rate the the "what is" dimension and one scale to rate the "what should be" dimension. Use of two ratings scales requires more response time from respondents which may lead to instrument fatigue, especially if the instrument is long. If the two dimensions are measured through two separate administrations of the instrument to limit occurrence of response patterns, the return rate for the instrument will probably decrease and the overall cost of the study will tend to increase.

Although use of two criteria (e.g., amount of difference and importance of difference) to form one rating, has conceptual limitations, one rating scale was viewed as the optimal approach for this study for the following reasons.

1. The instrument is easier and quicker for respondents to complete. Since the instruments used in this study were long, a simplified rating procedure was essential for maximizing the return rate and limiting unreliable results from instrument fatigue and response sets.

2. Through a feasibility study, it was discovered that respondents found two rating scales frustrating. Many felt unqualified to rate the "what is" dimension and tended to give all the needs the highest possible rating on the "what should be" dimension.

3. One rating scale may actually provide more reliable information since discrepancy scores tend to magnify any existing measurement error. In addition, discrepancy scores may not provide accurate information about the relative importance of the discrepancies. A third scale for rating the importance of reducing each discrepancy is necessary to obtain the most accurate data. However, use of three rating scales makes the process of assessing needs very cumbersome and complex.

4. Data analysis and reporting of results are simplified.

5. Recent research by Jenkins (1975) has shown a high correlation between the ranking pattern of needs using the discrepancy approach and the patterns resulting when only the "what should be" dimension is used.

Population for the Study

The population for the study was large cities which includes all cities with over 100,000 residents as identified in the 1970 census and the largest city in states which do not have a city with at least 100,000 residents. In 1970, there were 153 cities with over 100,000 residents and 11 states which did not have a city this large. This brought the total number of cities in the study to 164.

Research Methodology

Survey research was selected as the most appropriate methodology for the study since the study was national in scope and information was collected throughout the United States. Two sequential mail out surveys and personal interviews in selected large cities were the primary data gathering techniques. The study is comprised of four stages which are summarized in Table 1.

1. Feasibility Study
2. Exploration of the Needs
3. Synthesis of the Needs
4. Rating the Priority of the Needs

Feasibility Study

A literature search was conducted to identify some of the critical concerns for vocational education in urban areas. A draft forced choice instrument was developed which used a discrepancy scale for rating the current status and desired status of vocational educational programs according to 287 dimensions or items. The draft instrument was reviewed by four vocational educational education experts and four evaluation experts for comprehensiveness, clarity, relevance, and independence of the items and subsequently revised. Two city directors of vocational education in Ohio were asked to test the feasibility of using the instrument with other vocational directors throughout the nation. Both vocational directors and four members of

Table 1

Stages of the National Large Cities Vocational Education Needs Study

Stage	Description of the Activities	Outcome
Feasibility Study	A pilot needs assessment instrument was developed and tried out in two large cities to determine if a forced-choice instrument based on a review of the literature was a feasible approach for assessing the needs of cities.	A decision was made to generate statements of need using direct perceptions of practitioners rather than relying on the literature.
Exploration of the Needs	Three techniques were used to explore the critical needs in urban vocational education programs. Personal interviews were conducted with representative groups from the educational and manpower communities in 14 large cities. An open-ended mail survey was sent to district level vocational personnel in 160 large cities. Key documents from the literature were reviewed.	Over 6000 statements of problems and goals for resolving them were generated for 12 areas of vocational education.
Review and Synthesis of the Needs	The statements were categorized by content. The more specific needs were clustered together under the more general statements to provide an overall conceptual organization Repetitive statements were combined or eliminated. Statements were edited and rewritten so that all statements were expressed similarly.	Statements were reduced to 30 major goals and a 260 more specific needs relating to these goals. The statements were organized under four areas of vocational education: curriculum and instruction, administration, personnel, and guidance and counseling.
Rating the Priority of the Needs	A packet of five mail out survey instruments were developed to rate the relative priority of the goals and needs which emerged from the synthesis process. District level vocational personnel in 160 large cities were asked to rate the priority of the goals and needs. Of those surveyed, 69.4% responded.	A priority listing of the major goals and more specific needs for urban vocational education programs resulted.

their staffs completed and critiqued the instrument. Two hour sessions were held in each city to obtain evaluative feedback for improving the instrument. All six feasibility study participants reported the rating scales made the instrument too complex to be successfully and meaningfully completed by other vocational directors. As a group, they felt that the items did not generally represent important and current needs. They recommended that vocational directors be more involved in the process of developing the items and that the scaling be simplified.

A decision was made to accept the recommendations of the feasibility study participants rather than revising the original instrument. It was also decided to build a greater facility for exploring current needs into the study. Direct perceptions about needs from vocational education practitioners would be used to build a more representative, comprehensive, and current list of need statements. Even a thorough review of the literature concerning the needs in large city vocational programs would provide an insufficient base for building a valid instrument. Although there is a significant amount of literature about urban education needs, there is a scarcity of information about the needs experienced by vocational educators in urban areas. It was decided to use an open ended preliminary instrument to serve as a probing device for building a more carefully focused and valid instrument. Seeking input

from vocational education practitioners would also encourage a deeper level of involvement from vocational directors and hopefully increase their utilization of the study's results.

Exploration of the Needs

During the exploration of the needs, three methods were used to generate information: (1) personal interviews, (2) open ended mail survey, and (3) review of the literature.

Open Ended Mail Survey

An open ended mail survey was developed to obtain first hand perceptions of major needs from urban vocational educators.* The open ended survey asked urban vocational educators to describe their major problems and recommend goals for meeting these problems.

The instructions defined a problem as any situation in which current activities are seriously lacking in either scope or quality to adequately meet the needs of students. A goal was defined as the desired state of affairs for each problem situation. Example problem and goal statements were provided. The open ended instrument was divided into 12 pages--one for each of the areas defined below.

1. Secondary Vocational Education includes all public secondary school vocational skill programs for grades 7-12, such as cooperative work study, laboratory instruction (classroom and shop), and other related vocational skill programs.

* A copy is provided in Appendix

2. Post-secondary Vocational Education includes all full time post-secondary programs, such as extension, apprenticeship, on the job training manpower training, basic education, adult high school, continuing education (other than for school district employees), and other related vocational skill programs for post-secondary students.

3. Part Time Adult Education includes all part time adult education programs in any of the areas mentioned under post-secondary vocational education.

4. Curriculum and Instruction refers to all the processes and products used in the teaching-learning process for district vocational skill programs when planning, implementing, and evaluating the curriculum.

5. Guidance, Counseling, and Other Student Services refer to guidance and counseling functions for all vocational skill programs, such as student recruitment, student orientation, student vocational organizations, educational counseling, personal counseling, occupational counseling, health services, tutoring for courses, remedial education assistance, and referral to guidance and counseling services outside the school.

6. Job Placement and Follow-up refers to school and community job placement services and follow-up evaluation, counseling and placement of all former students.

7. Administrative Services refer to both day to day and long range planning, managing, financing, evaluating, and reporting on vocational education programs. It should also include concerns related to politics, current legislation, lobbying, and sources of fiscal aid.

8. Supervisory Services refer to the direction and evaluation of instruction and personnel.

9. Facilities, Equipment, Supplies and Transportation include the planning, design, purchase and loan maintenance, and use of all buildings, equipment, transportation vehicles, expendable supplies, and other physical resources used in conducting vocational skill programs.

10. Personnel include the sufficiency, quality, and variety of personnel, personnel development, and other issues relating to any or all classifications of district vocational education personnel.

11. Community Relations include initiating and/or maintaining relations with business and industry, specific community groups, government agencies, advisory councils, parent, research and development organizations, the general public and other community organizations at the local, state, and federal levels.

12. Social Problems and Special Students include any general social problems that directly affect vocational programs especially as related to special groups of students, such as the economically and/or socially disadvantaged, ethnic minorities, the physically, mentally, or emotionally handicapped, unemployed or underemployed city dwellers, the retired, veterans, returnees from correctional institutions, and males and females in untraditional vocational fields.

Sample for Open Ended Survey

The primary data collection unit in large cities was the Director of Vocational Education. The director was also asked to obtain assistance from other personnel in the school district when completing the questionnaire. There are a total of 160 vocational directors representing 164 large cities who were surveyed. In a few cities, the vocational director had responsibility for more than one city. For example, the head of the vocational education programs for Dade County, Florida has three large cities under his jurisdiction--Miami, Hileah, and Hollywood. In a few cases, two individuals share the responsibilities for the same city. For example, in Atlanta, Georgia one individual is in charge of secondary vocational education

and another individual is in charge of post-secondary vocational programs. There is some fluctuation in the titles and domains of responsibility for the heads of vocational educational agencies across cities. Various titles include: Director, Coordinator, Supervisor, Assistant Superintendent, Administrative Assistant, or Executive Director. The domain of responsibility for the heads of local vocational education agencies may be called Vocational, Technical, Occupational, Adult, Continuing and/or Career Education. Throughout this report, the title "large city director of vocational education" will be used.

The sampling frame of large city directors of vocational education was developed by sending a letter to the State Director in each state asking for the name and address of the vocational directors in the large cities within the state. For those state directors who did not respond to the request an alternate procedure was followed. First, existing mailing lists from a seminar for large city vocational directors were examined. If the names could still not be located, telephone calls were made to the State Directors to obtain the names and addresses.

Development of the Open Ended Instrument

During development of the open ended questionnaire, Dr. Donald Healas, the Director of Vocational Education in Cleveland, Ohio was contacted via telephone to discuss alternative formats for collecting information. Three

researchers in vocational education were also asked to review the instrument. It was recommended that information be collected about problems and goals rather than needs to facilitate communication with vocational directors. It was also recommended that the areas in which information is collected be expanded to 12 areas since the use of more categories would increase the specificity and number of problems and goals generated. Mr. Fred Ricketts, Director of Vocational Education in Columbus, Ohio was asked to review the final form of the instrument and made several recommendations which were implemented.

Procedures for the Open Ended Survey

The questionnaire was mailed to all 160 directors of vocational education in large cities of the United States. Accompanying the questionnaire were: (1) a letter of support from Dr. Benjamin Whitten, Director of the National Association of Large City Directors of Vocational Education and (2) a letter of explanation from Dr. Daniel Koble, Research Specialist at The Center for Vocational Education.* A three week deadline was given for returning the completed instrument. Because a large amount of time was required for completing the questionnaire a low return rate was expected. Several techniques were used to improve the

* Copies of these letters can be found in Appendix .

return rate: (1) follow-up postcards* were sent three weeks after the initial instrument to remind respondents to return the survey and to extend the deadline for another three weeks, (2) follow-up telephone calls were made to respondents in the 12 largest cities who still had not returned their questionnaires two weeks after the first follow-up was sent, (3) respondents were offered a copy of the study's results, and (4) informal communication channels were used to generate interest in the study.

Fifty of the 160 cities surveyed responded. Among the respondents were almost 70 percent of the 30 largest cities in the United States. Out of the responses came 6,000 problem and goal statements concerning urban vocational education.

Personal Interviews

The personal interviews were conducted in the fall of 1975 with representative groups in 14 major urban areas: New York City, Washington, Baltimore, Dallas, Detroit, Milwaukee, Indianapolis, Minneapolis, Denver, Omaha, Madison, Fargo, Houston, and Los Angeles. A random sample of ten cities was selected from the largest 25 cities in the United States for conducting personal interviews. Personal interviews were also conducted in four other large cities which were selected because travel to the cities for another purpose eliminated travel costs.

* See Appendix for a sample.

The reason for conducting these interviews was to obtain in-depth information about major needs from many different viewpoints. Those interviewed included vocational students, teachers, counselors, coordinators, and principals in local schools and centers; central office directors, supervisors, and coordinators at the district level; and in the community, members of the mayor's manpower staff, manpower training personnel, social service personnel, private and state job placement personnel, local employers, representatives of labor, concerned citizens, and parents. Most of the interviews were held in small groups of three to eight people.

Interview Schedules

Eight separate interview schedules were developed for conducting interviews with the various groups. The interview schedules were reviewed and critiqued by vocational personnel in large cities. Feedback from the six individuals who reviewed the schedules was used to revise the questions. In addition, the interview schedules were pilot tested in Cincinnati and subsequently revised.

Each interview schedule contained from four to 16 open ended questions. In addition, each group was asked a standard set of six questions. A brief description of each interview schedule is presented in Table 2.

Table 2

Interview Schedules

Schedule	Description
General Questions	Includes questions about the most serious social problems in the city; general attitude toward vocational education; most critical problems in the vocational program; suggested resolutions to problems, and projections for the future of vocational education in cities.
Employers, Private and State Job Placement Personnel, and Representatives of Labor	Includes questions about employment trends for the city; perceptions of the quality of the vocational programs and their graduates; and extent of the manpower community's participation in vocational programs.
Manpower Staff	Includes questions about the city's economic and employment situation; problems and recommendations for CETA programs; and amount and type of interaction with public vocational programs.
Board Members and Concerned Citizens	Includes questions about community involvement in vocational education; quality and sufficiency of vocational personnel and facilities; and support, power, and influence of the board regarding vocational education.

Table 2, continued

Schedule	Description
Principals and Supervisors	Includes questions about relevance of curriculum to current labor market needs, amount of individualization of the curriculum, procedures for evaluating and updating programs, use of innovative instructional methods, adequacy of student services, quality and sufficiency of personnel, facilities, and equipment, amount of personnel development, and type of linkages with the community.
Vocational Counselors and Placement Coordinators	Includes questions about adequacy of student support services, opportunities for occupational orientation and exploration for students, assistance for special need students, type of community liaisons, cooperation with other school personnel, and job placement procedures and success.
Vocational Education Teachers	Includes questions about procedures for evaluating and updating courses, variety and breadth of the curriculum, procedures for evaluating students, amount of individualization of instruction, classroom management procedures and problems, and type of instructional strategies used.
Students and Parents	Includes questions about how well the program is meeting individual interests and needs; relevance of the curriculum; amount of career education students receive regarding selecting a vocation, world of work experience, and locating employment; and adequacy of the vocational facilities.
The City Head of Vocational Education	Includes questions to probe the city directors response to the mailout open ended questionnaire.

Since a separate set of questions was not developed for each group, in some interviews, questions from several of the schedules were used. Interview schedules were used flexibly. Questions were not asked verbatim and were frequently modified, deleted, or expanded to better fit the situation.

Interview Procedures

In most of the cities, two 8-hour days were scheduled for interviews. A third day was spent observing selected vocational programs in operation. Vocational programs in approximately 60 facilities were observed. These included vocational programs sponsored by junior high schools, comprehensive senior high schools, vocational education schools, post-secondary institutions, community technical colleges, the Comprehensive Education Training Act (CETA), and Adult Education Centers.

In each city the director of vocational education was asked to select the interview candidates and schedule the interviews. Two hour group interviews sessions were scheduled into eight time blocks. Interview groups ranged in size from four to ten people. A suggested interview agenda, illustrated in Table 3, was sent to each large city director. Those interviewed represented both the manpower and educational communities; public, private, and federal vocational programs; secondary and post secondary programs; and local and district vocational education personnel. The city director was also provided with a list of criteria for selecting interview candidates which are listed in Table 4.

Table 3

Interview Agenda

	Day 1	Day 2
8 a.m. - 10 a.m.	Central Office Vocational Educators and Board Members	Vocational Counselors and Job Placement Coordinators
10 a.m. - 12 noon	Parents and Concerned Citizens	Vocational Teachers
12 noon - 1 p.m.	Lunch	Lunch
1 p.m. - 3 p.m.	Mayor's Manpower Staff, Private and State Job Placement Personnel, and Social Service Personnel	Students
3 p.m. - 5 p.m.	Advisory Council Members, Local Employers, and Representatives of Labor	Building Principals and District Coordinators

Table 4

Criteria for Selecting Interview Candidates

1. Candidates should be opinion leaders when appropriate.

2. The candidates for a group should represent a diversity of viewpoints if they exist.

3. Candidates should adequately represent special interest groups such as ethnic minorities, mentally and physically handicapped, disadvantaged, retired, returnees from correctional institutions, veterans, unemployed, and underemployed, when appropriate.

4. Candidates should adequately represent the range of city vocational programs as much as possible. Candidates should be selected from both the city's best and most problem-ridden programs; newest and oldest programs; and most heavily funded and most sparsely funded programs.

One interviewer conducted all the interviews in the 14 cities. The interviewer has worked in vocational education for many years and knows many of the large city directors of vocational education personally. The interviewer has had experience as a vocational teacher, state supervisor of agricultural education, state director of vocational education, and research specialist in vocational education.

Notes were taken by the interviewer to highlight the responses of those interviewed. At the end of the series of interviews in each city a tape was prepared summarizing the major needs expressed by those interviewed or observed by the interviewer. These tapes were subsequently transcribed and used as a basis for developing need statements.

Finding Needs in Current Literature

To supplement the needs identified by practicing vocational educators, several key documents from the literature were reviewed. Primary among these documents were: (1) the expressed priorities for research in vocational education of the Office of Education for the past two years, (2) the expressed priorities of The Center for Vocational Education, and (3) needs which had been identified by other need studies in urban vocational education, vocational education, and urban education.

The literature sources which were used to identify unique needs are described in Chapter II. Review of the literature led to further development of need statements or restatement of some field initiated need statements.

Synthesis of the Needs

The process of synthesizing the information gathered from personal interviews, mail surveys, and the literature into an organized set of concise and mutually exclusive need statements was a complex task since a wealth of information about important needs in vocational education resulted. During the synthesis of the needs, the results from each method were compiled and organized separately. Then the results from all three sources were compared and synthesized into a composite list of statements.

Synthesis of the Mail Survey Data

Over 6,000 problem and goals statements were produced through the open ended survey. Since this was the greatest mass of information, these data were organized first. The organization process included several steps accomplished in sequence. First, goal and problem statements were reviewed to insure that they were placed in the most appropriate of the 12 areas (e.g., curriculum and instruction, guidance and counseling, administration, etc.). Although respondents were asked to organize their statements into the categories in the open ended questionnaire,

many statements were inappropriately placed. Second, within each area, related statements were clustered together. Third, since the statements ranged from very general to very detailed and specific, the more specific statements were organized under the more general statements to provide an overall conceptual organization. Fourth, repetition was eliminated by either combining or eliminating overlapping statements. Fifth, statements were edited and rewritten so that all the general statements and specific statements were expressed in a similar manner.

Synthesis of the Personal Interview and Review of Literature Data

The interview data were recorded by city by group of respondents. This information was then used as a basis for developing statements that indicated major needs. The interview information was summarized by the interviewer into a list of 50 general needs. Need statements gleaned through literature review were also summarized into a composite list.

The summarized need statements from the interviews and review of the literature were then reviewed by the author. The purposes of the review were: (1) to winnow out needs which had not been mentioned in the open ended mail survey, and (2) to improve and elaborate on the existing statements. Unique needs were selected out by reviewing the data several times.

Selected needs were rewritten to match the format used for the data generated from the open ended survey. Then the needs were fit into the existing list in the most appropriate place or used to modify one of the current statements.

Review of the Synthesized Need Statements

The synthesis of the need statements resulted in approximately 395 specific needs, organized under 67 more general goals, and divided into nine categories. The curriculum and instruction category had subsumed the secondary, post-secondary, and part time adult vocational education categories because most of the needs mentioned in these areas were curriculum concerns. Statements which were not related to curriculum or instruction were placed in one of the other eight categories.

The statements were reviewed and critiqued by vocational and general educators. This was accomplished by asking various individuals to review one or more of the 12 categories of statements. In a university seminar on needs assessment, 12 graduate students reviewed the statements. At a planning conference for a seminar for large city directors of vocational education, ten vocational directors reviewed some of the statements. At The Center for Vocational Education, 25 research specialists and five graduate research associates reviewed some of the statements.

Each category of statements was reviewed approximately five times. A total of 52 reviewers examined the statements against seven criteria:

1. Importance for large city vocational programs
2. Non-repetitiveness
3. Clarity and understandability
4. Accuracy
5. Simplicity and efficiency of wording
6. Appropriateness of classification
7. Feasibility

Reviewers were asked to edit the statements to make them more readable and accurate. They were asked to add important statements which they felt had not been included. They were also asked to make additional comments and criticisms concerning the statements as a whole.

The recommendations from the critiques reduced the number of the statements considerably. Many statements within and across categories were combined. Statements which communicated poorly were either rewritten or deleted. Trivial statements were deleted. After implementing the recommendation, the 12 original categories were reduced to four categories.

1. Curriculum and Instruction was combined with secondary, post-secondary and part time adult programs.
2. Administration was combined with facilities/ equipment/supplies and community relations.
3. Personnel was combined with supervisory services.

4. Guidance and Counseling was combined with job placement/follow-up and social problems/special students.

Rating the Priority of the Needs

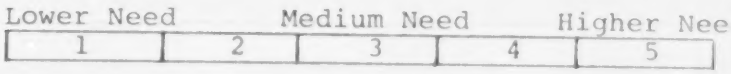
A packet of five questionnaires was developed for rating the priority of the needs. The instruments contained the 290 statements which had emerged from the synthesis process. The statements were organized into one Major Goals instrument containing 30 general goal statements and four Specific Need instruments containing 260 more specific need statements related to each of the major goals.*

The heads of vocational education in large cities completed the Major Goals form. Respondents were asked to read through all the goals first then rate the relative priority of each goal as: (1) Lower priority, (2) Medium priority, or (3) Higher priority. Respondents were asked to consider three indicators of priority when rating goals: (1) the intensity or severity of the underlying problem, (2) the urgency of the situation, and (3) the potential impact of meeting the goal on the quality of vocational education.

Four Specific Need instruments contained from 42 to 84 detailed statements of need in four areas: (1) Curriculum and Instruction, (2) Administration, (3) Personnel, and (4) Guidance and Counseling. The vocational

* These five instruments are included in Appendix

education directors in large cities were asked to distribute the four instruments to the members of their staff which they felt were most qualified to respond to each area. Respondents were asked to quickly read through all the statements first then to examine each statement individually and rate its degree of need for their school district from (1) Lower to (5) Higher.



When rating the degree of need, respondents were asked to consider both the amount of difference between "what is" and "what ought to be" and the importance of reducing that difference for their school district. Respondents were asked to give higher ratings to the areas which were in greatest need of development, improvement, or expansion.

Respondents to all five instruments were asked to keep in mind that their rating of each item was relative to the total set of items. There were no absolute lows or highs. Distinctions between higher and lower needs were sought through use of a forced distribution which encouraged use of the lower, middle, and higher rating categories with equal frequency. Respondents were asked to divide half of the items equally among the rating categories. The remaining half of the items could be assigned to the categories which were viewed as most appropriate.

Development of the Forced Choice Mail Survey

Draft versions of the five instruments and instructions for completing them were developed. The instrument packet was then reviewed by six research specialists in vocational education. The purpose of the final instrument review was to examine the clarity and efficiency of the wording of the instructions and items. Three of the individuals who reviewed the instrument were also in the process of developing a needs assessment instrument. Final editing of the survey instructions and items was accomplished using the recommendations of the reviewers.

Each survey in the packet was printed on a different color for easy identification. The surveys were typed on a composer with small but easily legible print to reduce the number of pages needed. The surveys were printed on both sides to reduce bulk as well as to make keypunching of the results more efficient.

The General Goals survey was laid out so that all 30 goals fit on one 11 x 17 1/2 inch page. This made it easier for the respondent to consider all 30 goals in relation to each other so that their relative priority could be rated. The Specific Need surveys were laid out in booklet format and printed on both sides so that as many of the needs as possible could be viewed at once.

Procedures for the Forced Choice Mail Survey

The packet of five force choice surveys were sent to the 160 directors of vocational education in large cities. Vocational directors were also sent an administration chart so that the four specific need surveys could be assigned to the most appropriate members of the vocational directors' staff. The zip codes of each city were used as ID numbers. These were written at the top of each survey before mailing, so that returns could be recorded by city and follow-up could be made only of non-respondents.

A variety of techniques were used to increase the response rate. An announcement letter preceding the questionnaire was sent.* Research by Heaton (1965) found this technique was effective in increasing mail questionnaire returns. Accompanying the survey was a letter of introduction signed jointly by the President of the National Association of Large City Directors of Vocational Education, Benjamin Whitten and Research Specialist at The Center for Vocational Education, Daniel E. Koble.* Research by Roher (1963) found personally typed letters on letterhead increased returns. Skipper and Ellison (1966) found that familiarity with the sponsor increases returns. Also accompanying the survey were packets of coffee, cream, and sugar. City directors were invited to "have a cup of coffee on us as you complete the survey."

* Copies can be found in Appendix

A four week deadline was allowed for returning the packet of surveys. Two weeks after the surveys were sent, the National Association of Large City Vocational Directors held a leadership seminar in Columbus, Ohio. Dan Koble and the author gave a joint presentation about the large city study. The results of the open ended survey, a description of the procedures for completing the forced choice survey, and an explanation of how the results of the study would be used were provided. The approximately 100 vocational directors attending the seminar were encouraged to return the survey which had already been sent to them. Skipper and Ellison (1966) found that personal contact by the sponsor increased returns.

Two days before the deadline, a follow-up postcard* was sent to those who had not yet returned their survey. Seventeen, or 10.5 percent, had responded to the survey by this date. One week after the follow-up postcard, a follow-up letter* and second copy of the entire survey packet was sent to those who had not yet responded. Sixty-six or 42 percent, had responded to the survey by this date. Two weeks after the second follow-up mailing, telephone calls were made to the largest 15 cities who had not yet returned their survey. Follow-up after the initial mailings by postcards at various intervals after the questionnaire mailing (Nichols and Meyer, 1966) and by phone calls (Roeher, 1963) were found to be effective in

* See Appendix for copies.

increasing return rates. The final rate of return for the surveys was 112 or 70 percent. The pattern of returns for the survey is illustrated in Figure 1.

Validity and Reliability of the Instrumentation

Content Validity

The content validity of the instrumentation is defined as the representativeness of the selected survey items to the universe of critical needs in large city vocational education programs. Content validity was carefully examined through an iterative item generation and review process which used multiple sources of information. To enhance the content validity of the instrument, need statements were generated from three sources: urban vocational education practitioners at the district level in 50 large cities; members of the educational and manpower communities in 14 of the largest cities; and the research results and opinions of observers of urban vocational education programs found in the literature. After a universe of items were generated, several rounds of review and critiques were used to help insure that selected items met basic content validity criteria of importance or relevance and representativeness or comprehensiveness. A total of 64 reviewers examined the items at different stages in the instrument development process. Approximately 75 percent of the reviewers had content expertise in vocational education. The other 25 percent had expertise in either survey research or needs assessment methodology.

Concurrent Validity

The concurrent, predictive, or criterion-related validity of the instrument can be described as the extent to which the findings of the study concur with the results of other measures of the same variables. Although no index of validity was calculated, several investigative procedures were used to assess concurrent validity. After a universe of need statements were developed through open-ended surveys and interviews with people in the field, statements were compared with key documents from the literature to assess the amount of agreement. The universe of field initiated needs were compared against perceptions of the needs by key observers of vocational education. The amount of concurrence between the field-generated need statements and the literature generated need statements was determined. There was considerable overlap between the two sources but both sources also identified unique needs.

Concurrent validity was again assessed after the results of the study were analyzed. The extent to which the needs identified as higher priority matched priority needs identified in two other national needs assessments was measured. Each study had measured the perceptions of needs by different constituents for vocational education. One study done by the National Advisory Council for Vocational Education (1974) used testimonies from educators, businessmen, labor union representatives and the general public in five large cities to determine priority needs. A second

study done by The Center for Vocational Education (Morrison, Gordon, and Green, 1976) asked a national sample of vocational educators serving in various roles to rate the priority of a list of research and development needs for vocational education.

The amount of overlap among the results of the three studies was quite high. Over 50 percent of the top priorities identified in the National Advisory Council Study were among the top ten highest ranked major goals in the study. The author worked closely with Morrison, et. al. in the development of their needs study to increase the compatibility of the items used in the two instruments. Most of the items used on the Major Goals instrument in this study were also used in the Morrison study with only minor wording changes. The rank order correlation between the priority of the needs in the Morrison study and this study was .65.

Face Validity

The face validity of the instrumentation is defined as the extent to which respondents view the instrument as being an important and understandable task to complete. Face validity is extremely important when conducting survey research, especially with a respondent group which generally has little patience with "hard core" research. The face validity of the instruments was carefully shaped through a variety of avenues.

First, the respondent group was given ownership in the instrument by participation in generating need statements. As much as possible, the wording and intent of the field-initiated statements were maintained in the final instrument.

Second, the complexity of the instrument was kept at a minimum. Three to five point rating scales were used rather than elongated scales. One rating scale was used rather than two for collecting discrepancy data. Respondents were not asked to provide demographic or "hard to access" information about their vocational program. Need statements were formatted so that the fewest possible words were used. Two or three word headings were used to summarize each major goal to simplify the amount of reading required.

Third, several supplementary activities were accomplished to encourage the respondents to view the study and its results as having high potential impact on the future of vocational education in cities. Preliminary results from the open-ended survey and interviews were presented to a group of vocational educators at a meeting of the American Vocational Association (Koble, 1975). Preliminary results were also described in an article in the American Vocational Journal (Koble and Adams, 1976). A more comprehensive paper on the preliminary results of the study was presented to large city vocational administrators

at the Leadership Seminar for Large City Directors of Vocational Education (Koble and Adams, 1976). The study also received the support of the National Association of Large City Directors of Vocational Education.

Reliability

The reliability of the instrumentation is defined as its stability or dependability and its accuracy or precision. Several precautions were taken to minimize measurement error and consequently to increase the reliability of the measuring instrument. For example:

1. The "Priority" and "Degree of Need" scales used to rate the items were carefully defined. Respondents were given specific criteria for making decisions about how to rate each item. Precise definitions to anchor the scales should increase consistency among individual ratings of the items.

2. To help minimize instrument fatigue, the items were divided into five parts so that no respondents would be required to complete more than 84 items. Yet, at the same time, each instrument is of sufficient length to enhance the reliability of the data.

3. The various sections of the survey were typically completed by an individual with experience and training relating to the content of the items for that section. For instance, the Guidance and Counseling section was typically completed by a district coordinator for Guidance Services. Asking individuals to respond only to items about which they have some content expertise will tend to increase the precision of the individuals' responses.

Using the TESCAN computer program (Wherry, 1975), a reliability coefficient was calculated for the instrumentation. The overall reliability for the entire set of the four Specific Need subscales, using the Kuder-Richardson

test for reliability, was 0.939. The reliability of the instruments appears to be very high. A reliability check was also built into the instruments by including the same item in more than one of the subscales. This allowed a double check to see if the item was rated similarly. The item on "Opportunities for students to develop positive work habits and work attitudes" was included in the Curriculum and Instruction and the Guidance and Counseling subscales. Item wording was slightly different in each scale. The item was rated very similarly in both instruments with mean ratings of 3.86 and 3.78. These results further support the reliability of the instruments.

Data Analysis Procedures

Preparing the Data for Analysis

Completed surveys were reviewed for ambiguous responses and missing data. None of the surveys were completely discarded as unusable. On the whole, respondents followed the instructions given when completing the instruments. In some cases, more than one response had been circled per item. All ambiguous and missing responses were treated as missing data and left blank when keypunching the data. Some respondents did not follow the guidelines for placing a minimum percentage of their responses in each rating category. These surveys were not discarded, however, since a forced distribution was used primarily to increase the spread of the ratings for analysis.

Instruments were prepared for keypunching. All data were punched directly from the instruments rather than transferred to coding sheets. Direct keypunching tends to reduce error and save time. Instruments had been designed for easy keypunching. The instruments contained only forced-choice numerical data, items were printed on both sides of the pages, and scales were laid out in a widely spaced, columnar format. ID numbers were punched in the first five columns of each data card. Eight data cards were used for each city. These were:

Card 1 - Demographic census data (size, geographic location, and minority population)

Card 2 - Major Goals Scale (30 items)

Cards 3 and 4 - Curriculum and Instruction Subscale (84 items)

Cards 5 and 6 - Administration Subscale (83 items)

Card 7 - Personnel Subscale (40 items)

Card 8 - Guidance and Counseling Subscale (53 items)

All five surveys were returned by every responding city so a complete set of data cards was prepared for each city. The data were keypunched and verified. Punched cards were then reviewed manually to ensure that a complete set of cards existed for each city and that all cards were in the proper order for data analysis.

Analyzing the Data

Since data were collected from an entire population, descriptive rather than inferential statistics were used for analyzing the raw data. Responses to the Likert-type scales were treated as interval data. The Major Goals instrument used a three-point scale. The other instruments utilized five-point scales.

Several canned statistical programs from the Statistically Oriented Users Package or SOUPAC (University of Illinois, 1973) were used to analyze the raw data. The items from the Major Goals instrument were analyzed as one data set. The items from the four Specific Need subscales were analyzed

as a second data set. The same analysis procedures were used on both sets of data. First, frequencies and percentages were computed for each item. Second, standard statistics including means, variances and standard deviations were calculated for each item. Third, the means were placed in rank order from highest to lowest in magnitude. Major Goals were ranked from 1 to 30 and Specific Needs were ranked from 1 to 260 where 1 was the highest rank. Ties were assigned average ranks.

A special computer program was written to access the SOMPAC Frequency, Standard Statistics and Rank Order canned statistical programs. These programs were used to determine what all large cities perceive to be their needs as well as what different types of cities perceive to be their needs.

After summary statistics were calculated, means and ranks were used as the data for further analyses. The population for these analyses is needs rather than people. Since the needs can be viewed as a sample of statements from a universe of needs, inferential as well as descriptive statistics are appropriate for these analyses.

The 260 specific needs were organized into clusters relating to each of the 30 major goals. The amount of correlation between the rankings for these two data sets was calculated. Spearman's Rank Order (RHO) correlation method was used (Guilford, 1965).

In calculating Spearman's RHO, the major goal ratings were placed in rank order from highest to lowest. The median ranks of the cluster of specific needs related to each goal were also placed in rank order from highest to lowest. For every pair of ranks for each goal area, the amount of difference between the ranks was determined. These differences were squared. The squares of the differences were summed; the coefficient p was computed using the formula:

$$p = 1 - \frac{6\ D^2}{N\ (N^2-1)}$$

where, D^2 = sum of the squared differences between ranks and N = number of pairs of measurements.

Additional analyses were run to determine if the needs of large cities differed by their size, geographic location, and percent of minority population. Census data from the 1973 population estimates of the U. S. Census Bureau were used to classify cities according to these three variables. All cities with more than 100,000 inhabitants were classified by size into three categories:

1. Large (more than 500,000 inhabitants)
2. Medium (200,000 to 500,000 inhabitants)
3. Small (less than 200,000 inhabitants)

Cities were classified by their geographic locations using the four census divisions illustrated in Figure 1 into:

1. Northeast
2. North Central
3. South
4. West

Figure 2

Classification of States into Four Geographic Regions

Cities were classified by their percentage of minority populations into three categories:

1. High (over 30 percent)
2. Medium (15-30 percent)
3. Low (under 15 percent)

Size, geographic location, and minority population were used as control variables in the second sequence of data analyses. The SOUPAC standard statistics and rank order computer programs were again used to analyze the raw data. Means and other standard statistics (standard deviation, variance, etc.) were calculated for the items classified by the levels of each control variable. In other words, the mean for each item was calculated for large cities as a group, for medium sized cities as a group, and for small cities. Then the items within each group were placed in rank order by their means.

To determine the extent of relationship among the vocational education priorities in cities of different size, geographic location, and minority level, Spearman's Rank Order Correlation method was again used. The ranks given to the major goals in small cities, medium cities, and large cities were compared to determine the extent of correlation among the rankings. Large differences among the ranks were than examined visually and described. This same process was repeated for comparing the priorities among cities in different geographic locations and in cities with different concentrations of minority residents.

Friedman's Rank Sums distribution free test was also calculated (Hollander and Wolf, 1973) to determine if the magnitude of perceived need differed by size, geographic location and minority levels. The Friedman statistic tests the hypothesis that two or more blocks of observations are equal against the alternatives that the blocks of observations are not all equal. To calculate the Friedman statistic, the block of mean ratings for each need were ranked from least to greatest across the rows or blocks. The columns of ranks were then summed to form a "sum of ranks (R_j)" for each level of each control variable. An example of the process for ranking the mean ratings by size is illustrated below.

Blocks (Needs)	Levels of Size		
	Small	Medium	Large
1	4.05 (2)	4.25 (3)	3.90 (1)
2	3.82 (1)	3.90 (2)	4.25 (3)
3	2.85 (1)	2.90 (2)	3.95 (3)
.	.	.	.
.	.	.	.
.	.	.	.
30	3.92 (2)	3.91 (1)	3.99 (3)
	$R_1 = 6$	$R_2 = 8$	$R_3 = 10$

The ranks were then compared using the following formula for the Friedman statistic with a correction for ties among the ranks:

$$S' = \frac{12 \sum_{j=1}^{k} (R_j - nR..)^2}{nk\,(k+1) - \frac{1}{(k-1)} \sum_{i=1}^{n} \left\{ \left(\sum_{j=1}^{g_i} t_{i,j}^3 \right) - k \right\}}$$

where,

K = the number of levels of the control variable

R_j = the sum (over n blocks) of the ranks received by each level of K

$R.. = \frac{k + 1}{2}$

n = the number of blocks (each need is one block)

g_i = the number of tied groups in block i

To determine whether the coefficient derived when calculating the Friedman Rank Sums test was significant, a chart of the chi-square distribution was used. A distribution free multiple comparison procedure based on Friedman Rank Sums (Hollander and Wolfe, 1973) was then used to determine where the significant differences among the levels of the control variables existed. For the all treatment multiple comparison procedure, the $k\,\frac{(k-1)}{2}$ absolute differences $|R_u - R_v|$ were calculated. At an experientwise error rate of α, it could be decided that:

$$r_u \neq r_v \text{ if } |R_u - R_v| \quad q(\alpha, k, \infty) \sqrt{\frac{n(k)\,(k+1)}{12}}$$

where $q(\alpha, k, \infty)$ is the upper α percentile point of the range of k independent variables. Values of $q(\alpha, k, \infty)$ were given in a table of critical values.

IV. RESULTS

Introduction

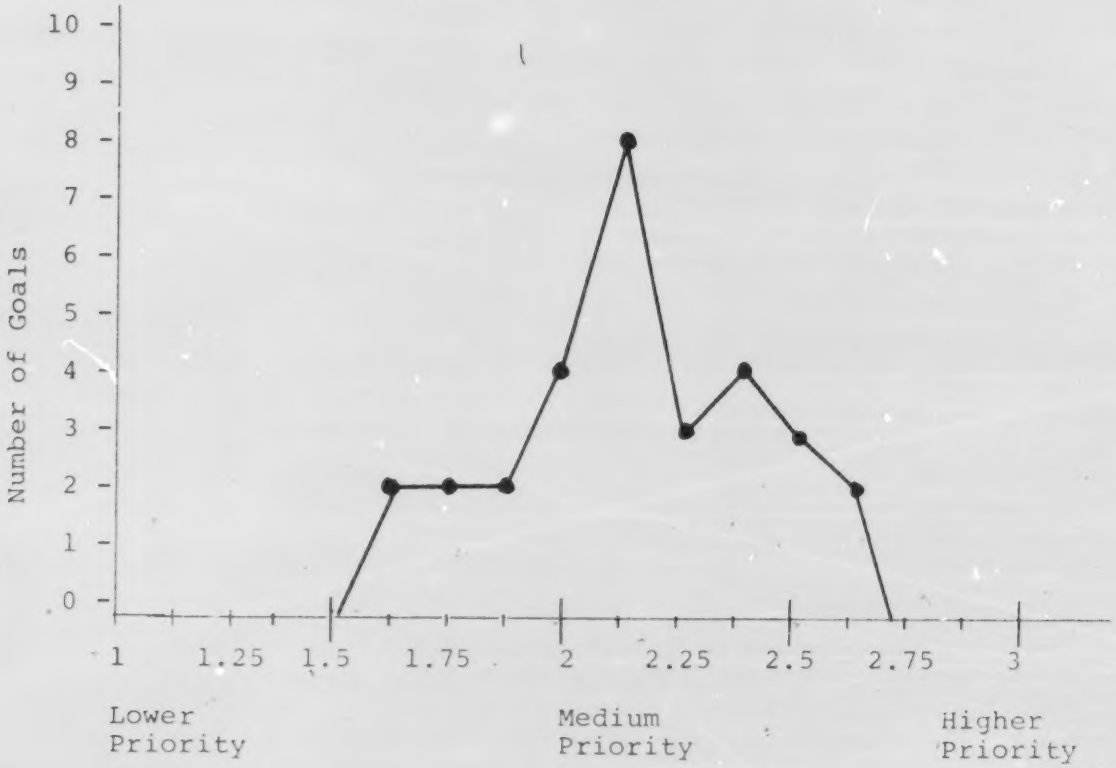
The results section is divided into three parts: (1) national major goal priorities for urban vocational education, (2) national specific need priorities for urban vocational education, and (3) comparison of the priories for vocational education in cities by size, geographic location, and level of minority population. Although questionnaires were returned from 112 of the 160 cities surveyed (70 percent) due to some late returns, only 106 questionnaires were used in the data analysis. A complete response to the five part survey was received from all 106 cities who responded.

National Major Goal Priorities

The priority of the 30 major goals was rated on a three point scale from (1) lower priority, (2) medium priority, to (3) higher priority. Responses were summarized to provide mean ratings for the goals which were subsequently placed in rank order from highest to lowest. On a three point scale, the mean ratings of the goals have a range of 1.08 scale points. The highest priority goal has a mean rating of 2.70. The lowest priority goal has a mean rating of 1.62. A graphic display of the distribution of mean ratings for the 30 goals is presented in Figure 2.

Figure 3

Distribution of Mean Ratings for Major Goals



Of the ten highest ranked goals, four were in guidance and counseling, three were in curriculum and instruction, and three were in administration. The ten highest ranked goals are listed in descending order of priority in Table 5. Of the ten out of 30 goals placed in the medium priority category, three are in curriculum and instruction, three are in guidance and counseling, three are in administration, and one is in personnel. The ten goals in the medium priority range are listed in descending order of priority in Table 6. Of the ten out of 30 goals rated as having the lowest priority, three are in personnel, three are in administration, two are in curriculum and one is in guidance and counseling. The ten goals in the lower priority range are listed in descending order of priority in Table 7.

City directors perception of the higher and lower priorities both confirm and negate some commonly held preconceptions about vocational education in large cities. Although cities are typically thought of as having old, inadequate facilities and out of date equipment, the need for expanded and rennovated facilities was a lower priority (rank = 22). The need for more up to date equipment was more highly rated than facilities (rank = 11), but is still not one of the top priorities for cities. The need for a sufficient level of supplies was also viewed as a medium priority (rank = 16.5).

Table 5

Higher Priority Goals for Vocational Education in Large Cities as Perceived by City Directors

Rank*	Goal	Mean**
1	Funding Base. Provide a more adequate and equitable funding base for large city vocational education programs from state, local, and federal sources.	2.70
2	Vocational Guidance. Provide comprehensive guidance and counseling services so vocational students can better select careers and educational programs suited to their interests and abilities.	2.69
3	Relevance of Vocational Content. Insure the relevance of vocational curricula to current job practices and opportunities through effective means for identifying, selecting, and updating content.	2.61
4	Basic Academic Instruction. Provide opportunities for all vocational students to acquire the reading, communication, and math skills required for coursework and jobs.	2.58
5	Job Placement. Coordinate and expand efforts at all levels (teacher, school, district, state, federal) to place vocational students in occupations related to their education.	2.57
6	Community Relations and Support. Better communicate the content and benefits of vocational education to parents, students, employers, and all general educators.	2.50
7	Work Experience. Expand opportunities for students to explore and practice job skills in community and school settings.	2.44
8	Curriculum Development. Upgrade and improve vocational curricula and the curriculum materials used by students and educators.	2.40
9	Accessible Guidance Services. Make guidance, counseling, and placement services more accessible to all vocational students.	2.39
10	Coordination with the Manpower Community. Pursue better coordination with business, industry, labor, and other key segments of the manpower community.	2.34

*1 is the highest rank.

**3.0 is the highest and 1.0 is the lowest possible mean score.

Table 6

Medium Priority Goals for Vocational Education in Large Cities as Perceived by City Directors

Rank	Goal	Mean
11	Up-to-Date Equipment. Improve the planning and financing of equipment for vocational instruction so up-to-date equipment can be maintained.	2.27
12	Transition from School to Work. Develop pre-employment job readiness programs and post-employment follow-through activities for assisting students in their transitions from school to work.	2.26
13.5	Serving Persons with Special Needs. Improve ability of vocational education to serve persons with special needs (i.e., physical or mental handicaps, limited English speaking ability, inmates in correctional settings, migrants, etc.)	2.24
13.5	Follow-up. Improve and expand follow-up studies of former students and their employers.	2.24
15	Curriculum Innovation. Improve and expand the development, diffusion, and maintenance of new ideas in vocational education.	2.23
16.5	Local Management. Provide tools and techniques for improving local planning, management, and evaluation of vocational education programs.	2.22
16.5	Expendable Supplies. Provide a sufficient level of supplies for operating all vocational programs.	2.22
18	Personnel Development. Improve opportunities for practicing vocational education personnel to maintain and expand their competencies.	2.19
19	Reducing Dropout, Absenteeism, and Tardiness. Develop services and procedures to reduce student dropout rates, absenteeism, and tardiness.	2.18
20	Flexible, Varied Vocational Programming. Increase the flexibility of vocational instruction to meet the pressure for more enrollment and to serve the variety of individuals in urban settings.	2.17

Table 7

Lower Priority Goals for Vocational Education in Large Cities as Perceived by City Directors

Rank	Goal	Mean
21	Adult Vocational Education. Expand adult vocational education programs to more adequately serve the training needs of adults who are unemployed or underemployed.	2.10
22	Facilities and Instructional Space. Expand and rennovate the facilities and space available for vocational education.	2.06
23	Preservice Preparation. Improve the preservice preparation of vocational education personnel to meet present and emerging competency needs.	2.03
24	Teacher Involvement in Supplementary Activities. Increase the participation of vocational teachers in supplementary activities, such as curriculum development, professional development, community relations, and job placement.	2.02
25	Leadership Development. Define leadership roles and design and implement leadership preparation programs for vocational administrators and supervisors.	1.97
26	Equal Educational Opportunities. Develop standards and procedures for enrolling students in appropriate vocational programs on an equal opportunity basis.	1.92
27	Quantity, Quality, and Diversity of Personnel. Provide a greater quantity of, more capable, and a wider variety of specialized personnel for vocational programs.	1.86
28	Cooperation Among the Levels of Vocational Education. Increase cooperation among the various levels and departments in vocational education.	1.85
29	Coping with Social Problems. Develop mechanisms for coping with delinquency, social problems, and disruptive activities which affect urban schools.	1.73
30	Post-Secondary Vocational Education. Assist the orderly development of post-secondary vocational education programs, methods, and materials.	1.62

Inner city schools are often thought of as attracting more "lower quality" personnel and having insufficient quantity of personnel to adequately serve all the students enrolled. Yet the need for a greater quantity and more capable personnel was rated as one of the lower priorities (rank = 27). Personnel related activities, such as improved preservice preparation (rank = 23), more defined leadership development activities (rank = 25), more in-service personnel development (rank = 18), and increased involvement of teachers in areas other than teaching (rank = 24) were all rated fairly low in terms of their relative priority to the other 30 goals.

Another area in which cities are typically thought of as having more intense problems is in the social dimension. Yet coping with social problems, delinquency and disruptive activities was ranked very low in terms of its relative priority (rank = 29).

Since most cities have a greater variety of industries and businesses in operation, the placement of students in cooperative-work-experienced programs is usually viewed as being less difficult in cities. However, expanding work experience opportunities for students is perceived as one of the higher priority needs (rank = 7) by vocational directors.

The popular media as well as more scholarly avenues report that many cities are moving toward a financial crisis. Urban schools are viewed as riding on the crest of the

crisis since they are primarily supported through local taxes and bonds. The results of the study firmly support this preconceived need. The number one priority of city directors is to provide a more adequate and equitable funding base for large city vocational programs.

The need for more comprehensive and more accessible vocational guidance and job placement services are viewed as very high priorities for cities. Of the highest ten priorities, 40 percent relate to guidance and placement. High priority need span the areas of: vocational guidance (rank = 2), job placement (rank = 5), work experience (rank = 7), and accessible guidance services (rank = 9).

Related to the guidance and placement area is a high need to improve community relations and support with parents, students, employers and general educators (rank = 6). Also related to the guidance and placement area is a high need to improve coordination with the manpower community (rank = 10).

In the area of curriculum, a very high need exists for developing techniques to insure the relevance of vocational content (rank = 3). A high need for basic academic instruction is also evident (rank = 4). There is also a high need to upgrade and improve vocational curriculum and curriculum materials (rank = 8).

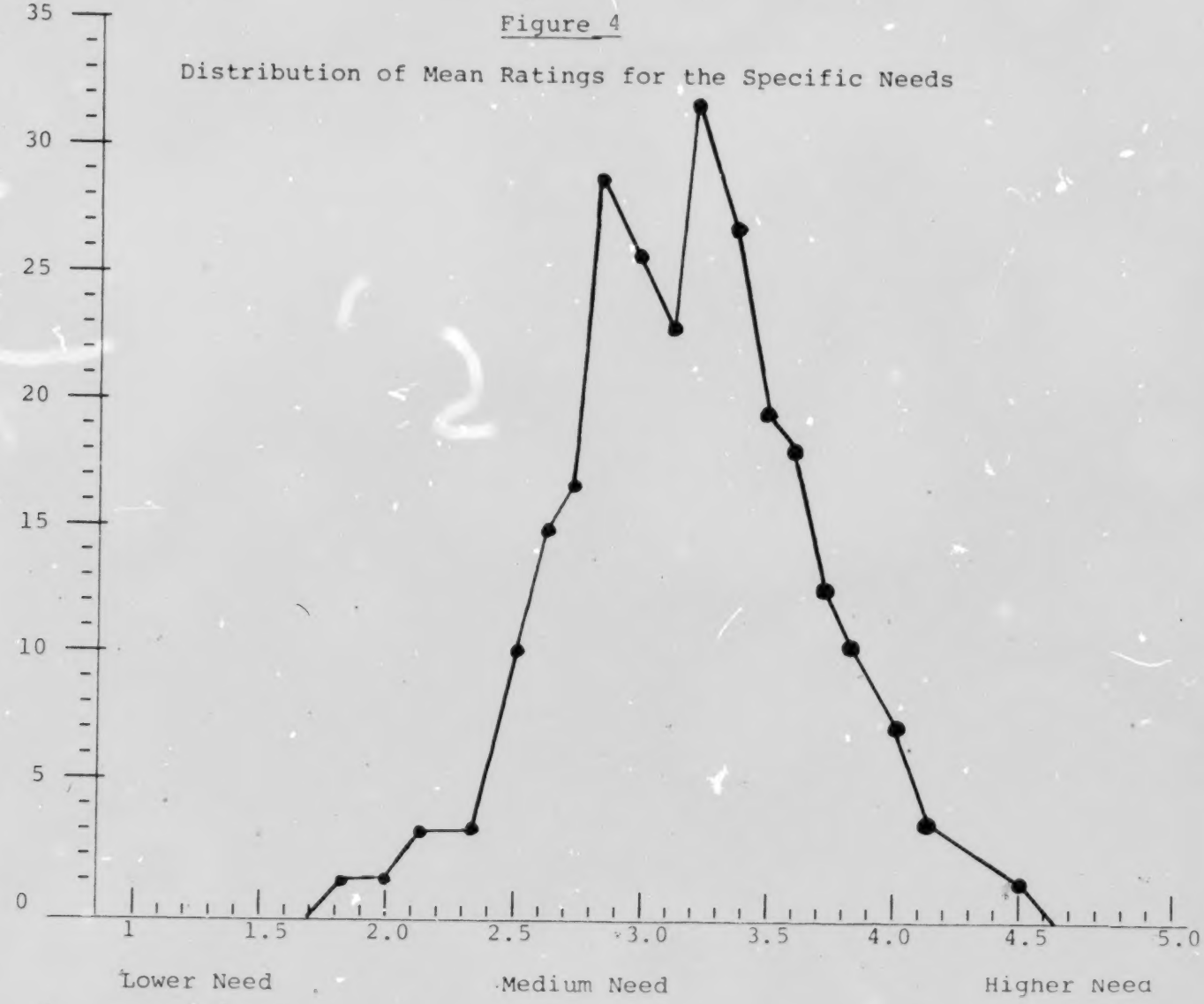
National Specific Need Priorities

The four specific need subscales were completed by a variety of individuals at the district level in 106 large cities. Among those who responded to the specific need scales were: curriculum coordinators or directors, directors or coordinators of guidance services, assistant directors, administrative assistants, coordinators of career education, school principals and directors, educational consultants, district supervisors, personnel administrators, assistant superintendents, vocational directors, coordinators of staff development, school-industry coordinators, selected teachers, and selected counselors.

A total of 260 specific needs were rated on a five point degree of need scale where 1 = lower need, 3 = medium need, and 5 = higher need. The needs were divided among four subscales. Responses were summarized to provide a mean rating for each need. The means were then placed in rank order from 1 to 260. The range of mean ratings for the 260 needs span 2.54 points on a five point scale. The highest ranked need was a mean of 4.38. The lowest rank need has a mean of 1.84. A graphic display of the distribution of the means is presented in Figure 3. The standard deviations of the ratings for the needs are 0.90 to 1.61 or span 0.71 points.

Figure 4

Distribution of Mean Ratings for the Specific Needs



The highest ranked 50 specific needs for vocational programs in large cities as perceived by central office staff are listed in descending order of priority in Tables 8 through 12.* The average ratings for the 50 highest ranked needs range from 4.38 to 3.52. The largest percentage of specific needs in the top 50 are in the major goal area of vocational guidance. Fully, 18 percent or nine of the top 50 needs concern vocational guidance. The vocational guidance needs in the top 50 focus on concerns such as:

- Counseling for entering vocational students (rank = 3.5)**
- Improving preservice training for vocational counselors (rank = 5.5)
- Allocating more of counselors time to face to face counseling with vocational students (rank = 5.5)
- Providing some systemic counseling to all students (rank = 11.5)
- Developing well rounded interest and aptitude testing programs for all vocational students (rank = 15)
- Developing pre-vocational programs for middle school students (rank = 36)
- Improving the delivery system for career education (rank = 39)
- Infusing career education concepts into the vocational curriculum (rank = 46)
- Reducing the student counselor ratio (rank = 8.5)

* See Appendix for the means and ranks for all 260 Specific Needs.

** Rank 1 is highest.

Table 8

Highest Ranked Ten Specific Needs for Vocational Education in Large Cities as Perceived by District Level Vocational Education Personnel

Rank*	Need	Mean**
1	Firm commitments concerning amounts of and timelines for vocational funding so local districts may plan and initiate programs on schedule.	4.38
2	District forward funding based on long-range plans to permit continuity of program planning and services.	4.03
3.5	Parental awareness of the goals and opportunities available in secondary and post-secondary vocational programs as compared to college.	4.00
3.5	Counseling prior to enrollment to assist students in clarifying their purpose for enrolling in vocational education and selecting the right program.	4.00
5.5	Effective preservice counselor education programs for preparing counselors in vocational guidance.	3.99
5.5	Allocation of counselors' time so that an adequate percentage is spent in face-to-face counseling with vocational students.	3.99
7	Coordination between vocational and academic curricula so that academic courses emphasize vocational applications and academic skills are improved within vocational courses.	3.96
8	Ways to reduce student absenteeism and tardiness.	3.95
9.5	Awareness by federal and state vocational education leaders of the critical large city vocational education issues.	3.91
9.5	Counseling for students with negative attitudes toward work, the educational system, themselves and/or others.	3.91

*1 is the highest rank.

**5.0 is the highest and 1.0 is the lowest possible mean score.

Table 9

Medium High Needs for Vocational Education in Large Cities as Perceived by District Level Personnel

Rank	Need	Mean
11.5	Providing some systematic counseling to all students, not just when they are in trouble.	3.88
11.5	Training vocational teachers and counselors in new and innovative approaches to vocational education.	3.88
13.5	Opportunities for students to develop positive work habits and attitudes (e.g., dependability, ability to follow through, efficient use of time, pride of craftsmanship, willingness to learn).	3.86
13.5	Systematic initiation of new vocational programs in emerging occupations and fields with expanding employment opportunities.	3.86
15	Well-rounded and valid testing program including interest and aptitude tests for assisting all vocational students, ninth grade through adult, in selecting a vocation.	3.85
16	Development and use of competency or performance based instruction.	3.84
17	Standards, procedures, and funds for replacing obsolete equipment.	3.81
18	Involvement of teachers in in-service education and industry-based exploratory and on-the-job experiences.	3.80
19	Direct federal funding to major urban areas without their elimination from state funding.	3.79
20.5	Procedures for incorporating demonstrated innovations into the operating school district when outside funds are no longer available.	3.77

Table 10

Medium Needs for Vocational Education in Large Cities as Perceived by District Level Personnel

Rank	Need	Mean
20.5	Business and industry's use of vocational education programs as a source of employees.	3.77
22.5	Rapport and cooperation between academic and vocational teachers.	3.76
22.5	Up-to-date, supportive public image of vocational education.	3.76
24	Communication with middle and high school students through various avenues to convey the career opportunities in secondary and post-secondary vocational education programs.	3.74
25.5	General purpose funds, as well as categorized funding so some district priorities can be addressed.	3.72
25.5	Middle school and high school counselors knowledge about available secondary and post-secondary vocational programs.	3.72
27.5	Resource allocation formulas which allow for differences in the cost of delivering vocational education in urban and rural areas.	3.70
27.5	Community general awareness of the vocational program offerings available.	3.70
29	Developing the special awareness, instructional skills, and service skills required to serve the handicapped, minorities, and other groups with special needs.	3.68
31.5	Development of alternative bases for obtaining funds at the local level.	3.64

Table 11

Medium Low Needs for Vocational Education in Large Cities as Perceived by District Level Personnel

Rank	Need	Mean
31.5	Opportunities for students to develop problem-solving skills for coping with work entry and job adjustment problems.	3.64
31.5	Collection of information from present employers of vocational graduates concerning graduates on-the-job performance.	3.64
31.5	Up-to-date and valid information about the job competencies needed in various occupational areas.	3.64
34	Vocational education curricula and instructional materials for use in open entry open exit situations.	3.63
36	Pre-vocational orientation and exploratory programs for middle school students to introduce them to several career clusters.	3.62
36	Pre-employment job readiness programs to help students learn job seeking skills, such as job hunting, job interviews, completing job applications, etc.	3.62
36	Communication with all general educators (principals, assistant principals, supervisors, department chairpersons, teachers, counselors, and other staff) concerning the goals and content of vocational education.	3.62
39.5	Availability of vocational education centers and tactics for for attracting students to them.	3.61
39.5	Clear-cut delivery system for supplying career information and skills to vocational students.	3.61
39.5	Methods for diagnosing the basic academic competencies of students so that appropriate remedial activities can be prescribed.	3.61

Table 12

Lower Needs for Vocational Education in Large Cities as Perceived by District Level Personnel

Rank	Need	Mean
39.5	Opportunities for vocational leaders to improve skills in areas, such as long-range planning, needs assessment, program evaluation, management techniques, and information systems.	3.61
42	Systematic procedures for using the information collected through follow-up studies to improve the educational process.	3.59
43.5	Vocational education programs for early school leavers and unemployed youth.	3.57
43.5	Personnel development in maintaining current career and vocational information in areas, such as job requirements, working conditions, and employment opportunities for various occupational areas.	3.57
46	Frequent and consistent communication with employers to provide information on the programs offered, services provided, and employees available through vocational education programs.	3.56
46	Remedial basic skill programs for students with weak academic skills.	3.56
46	Infusion of career education concepts into all vocational instruction.	3.56
48.5	Appropriate student-counselor ratio at the pre-vocational, secondary, and continuing education levels.	3.55
48.5	Curriculum materials in math and English geared to vocations.	3.55
50	Assisting vocational teachers to instruct the academically deficient students in their vocational classes.	3.52

An equally large percentage of the top 50 needs fell into the major goal area of community relations. The 18 percent or nine community relations needs in the top 50 are concerned with:

- Increasing parental awareness of vocational education opportunities as compared to college (rank = 3.5)
- Increasing Federal and state awareness of large city vocational education problems (rank = 9.5)
- Increasing business and industry's use of vocational students as employees (rank = 21)
- Developing an up to date, supportive image for vocational education (rank = 22.5)
- Communicating with middle and high school students about vocational education opportunities (rank = 22.5)
- Communicating with the general public about vocational education (rank = 27.5)
- Communicating with general educators about vocational education (rank = 36)
- Communicating with employers about vocational education programs, students, and services (rank = 46)

Twelve percent or six of the top 50 specific needs relate to the general goal area of Funding Base. These needs focus on:

- Developing firm commitments concerning the amount of and timelines for vocational funding (rank = 1)
- Providing forward funding (rank = 2)
- Providing direct funding to large urban areas (rank = 19)
- Providing general purpose as well as categorized funding (rank = 25.5)

- Improving the resource allocation formulas used to fund urban and rural areas (rank = 27.5)
- Developing alternative funding bases (rank = 30)

An equally large 12 percent of the 50 highest specific needs can be classified under the general goal area of Basic Academic Instruction. The six needs in this area are:

- Increasing the coordination between academic and vocational curricula (rank = 7)
- Increasing the rapport between vocational and academic teachers (rank = 22.5)
- Improving methods for diagnosing students' remedial basic academic needs (rank = 39)
- Improving remedial academic programs (rank = 46)
- Developing curriculum materials in math and English geared to vocations (rank = 48.5)
- Assisting vocational teachers to instruct academically deficient students (rank = 50)

Eight percent or four of the 50 highest ranked specific needs can be classified under the general goal areas of Curriculum Innovation. There is a need for enhancing curriculum innovation in the following ways:

- Training vocational personnel to use innovations (rank = 11.5)
- Developing competency based instruction (rank = 16)
- Incorporating innovations when outside funding ends (rank = 20)
- Developing open entry/open exit instruction (rank = 34)

Eight percent or four of the 50 highest ranked specific needs can be classified under the general goal area of Personnel Development. These four needs include:

- Providing industry based teacher in-service training (rank = 18)
- Assisting vocational personnel to instruct students with various special needs (rank = 29)
- Providing leadership training in long range planning, needs assessment, program evaluation, and management information systems (rank = 41)
- Assisting vocational personnel to maintain up to date information in their occupational area (rank = 42)

The general goal area of Reducing Drop Out, Absenteeism and Tardiness captured six percent or three of the top 50 specific needs. These needs include:

- Developing ways to reduce absenteeism and tardiness (rank = 8)
- Counseling students with negative attitudes toward school (rank = 95)
- Providing vocational programs for early school leavers (rank = 43.5)

Six percent or three of the 50 top priority specific needs fell into the general goal area of Transition from School to Work. A need was expressed for:

- Providing opportunities for students to develop positive work habits and attitudes (rank = 13.5)
- Pre-employment training in coping with work entry and job adjustment problems (rank = 32)
- Pre-employment training in job seeking skills (rank = 36)

The remaining specific needs in the top 50 fell into four major goal areas. Four percent or two needs each are in Relevance of Vocational Content and Follow-up. Two percent or one need each are in Up to Date Equipment and Facilities. Figure 4 presents a graphic display of the percent of the 50 top ranked specific needs that are within each goal area. Figure 4 portrays an overall picture of greater and lesser areas of priority. However, there is some variation in the number of specific needs classified under the different goal areas. The number of needs in a goal area cluster range from 16 to 4. Most clusters contain between eight and nine specific need statements. Figure 5 displays the percentage of the total number of specific needs for each goal area that were ranked among the top 50.

Although the 260 specific needs have been categorized into 30 major goal areas, considerable overlap and inter-relationships among the categories exist. There were only two needs in the top 50 classified as Relevance of Vocational Content, however, many of the needs in other categories relate to this concern. For example, "assisting vocational personnel to maintain up to date information in their occupational area" was classified as a Personnel Development need but also relates to the Relevance of Vocational Content. A need, such as "using the information collected through follow-up studies to improve vocational programs" was classified under Follow-up but again also relates to the Relevance of Vocational Content.

Figure 5

Percent of the Fifty Top Ranked Specific Needs Under Each Major Goal Area

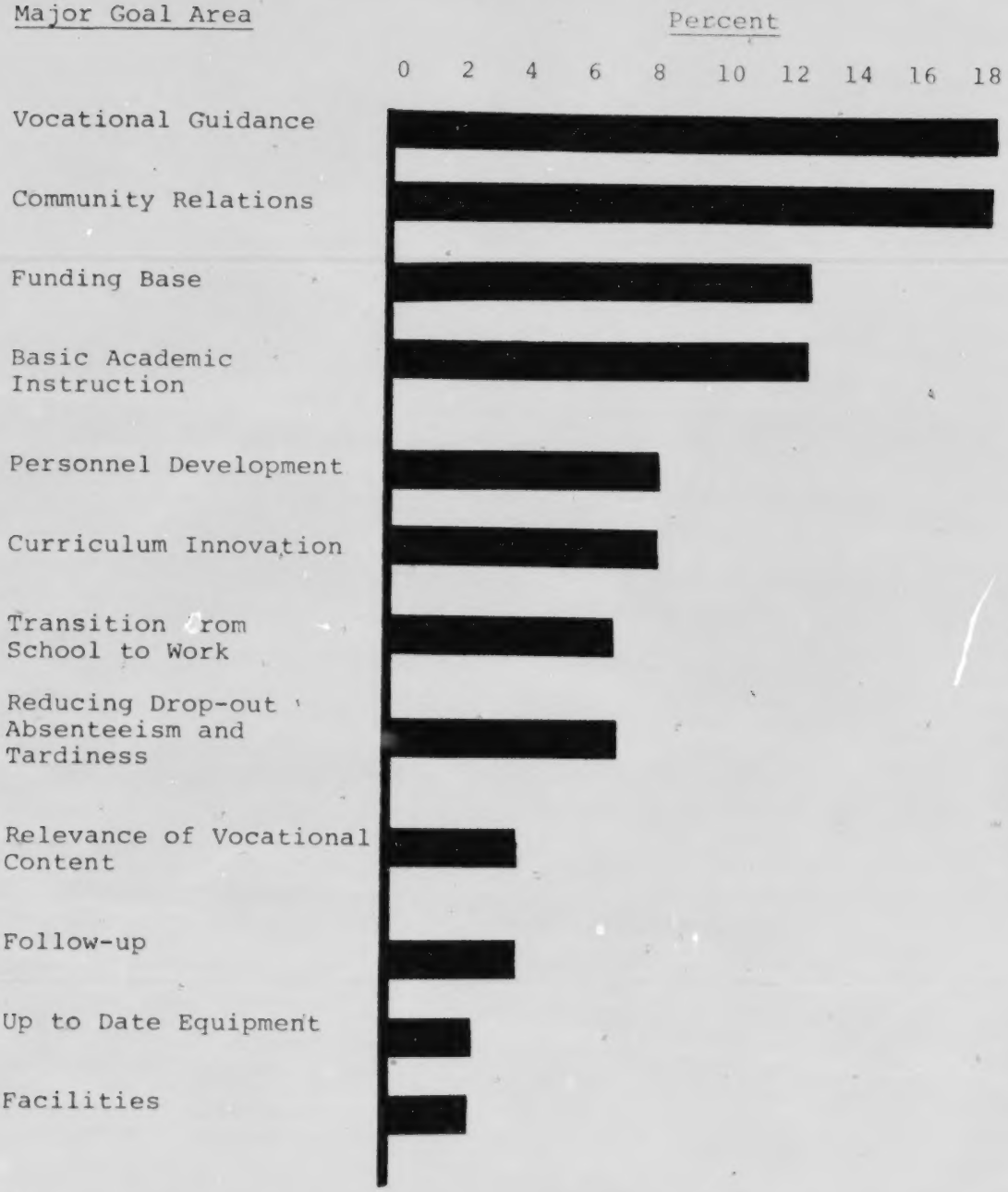
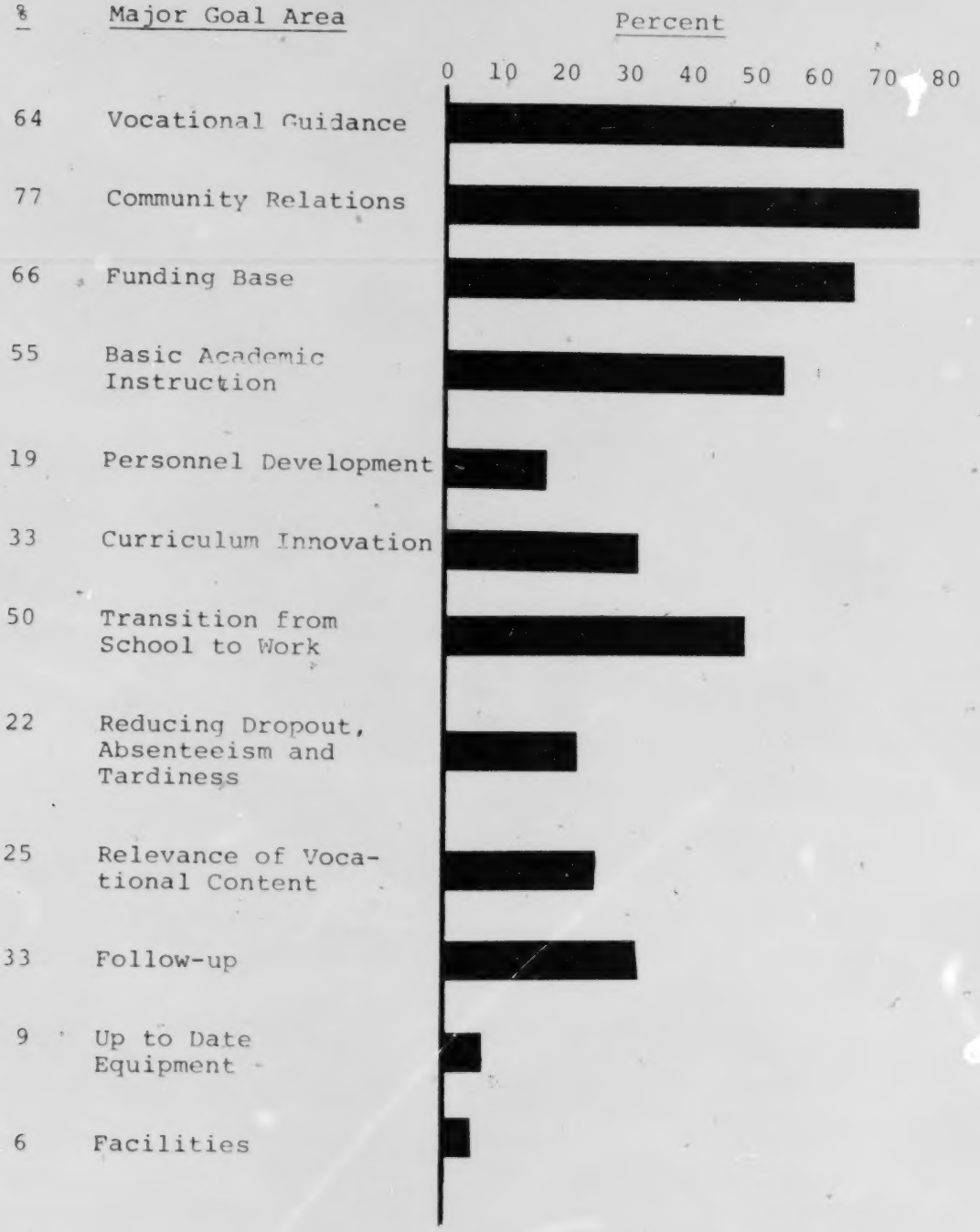


Figure 6

Percent of Specific Needs Under Each Major Goal Area that Were Ranked Among the Top 50



No attempt was made to classify the specific needs into totally independent and mutually exclusive categories because the interrelationships among the needs are many, complex and important. The elimination of the interrelationships among the major goal categories would restrict the expression of the needs to such an extent that many would become meaningless. The category system was primarily used to provide a framework for organizing and synthesizing a massive amount of data into more manageable and meaningful segments. The organization of the needs by major goal areas was designed to facilitate use of the information by different groups and in different substantive areas.

However, since a classification scheme is used, it is important to test its validity and usefulness as a synthesis vehicle. Comparisons between the rankings of the 30 major goals and the rankings of the specific needs classified under these goals were made. The extent of agreement between the average rankings of each major goal and the median ranking of each goal related cluster of specific needs was measured. Median rankings were used for the specific needs to minimize the effects of extreme scores. To assess the extent of agreement between the need rankings and goal rankings, Spearman's rank difference correlation method was used (Guilford, 1965). The ranks and differences between the ranks for major goals and specific needs are displayed in Table 13.

Table 13

Comparison of the Rankings* of Thirty Major Goals and Thirty Specific Need Clusters

Goal Area	Major Goal Ranks	Specific Need Median Ranks	Amount of Difference
1. Basic Academic Instruction	4	4	0
2. Relevance of Vocational Content	3	12	9
3. Work Experience	7	17	10
4. Curriculum Development	8	21	14
5. Serving Persons with Special Needs	13	28.5	14.5
6. Flexible, Varied Vocational Programming	20	16	4
7. Adult Vocational Education	21	28.5	7.5
8. Post-Secondary Vocational Education	30	30	0
9. Curriculum Innovation	15	6	9
10. Funding Base	1	1	0
11. Local Management	16.5	18	1.5
12. Community Relations and Support	6	2	4
13. Coordination with the Manpower Community	10	10	0
14. Cooperation Among the Levels of Vocational Education	28	22	6
15. Up-to-Date Equipment	11	20	9
16. Facilities and Instructional Space	22	23.5	1.5
17. Expendable Supplies	16.5	27	10.5
18. Personnel Development	18	11	7
19. Leadership Development	25	9	6
20. Teacher Involvement in Supplementary Activities	24	23.5	0.5
21. Quantity, Quality, and Diversity of Personnel	27	25	2
22. Preservice Preparation	23	8	15
23. Equal Educational Opportunities	26	26	0
24. Vocational Guidance	2	3	1
25. Reducing Dropout, Absenteeism, and Tardiness	19	13	6
26. Coping with Social Problems	29	19	10
27. Accessible Guidance Services	9	14	5
28. Transition from School to Work	12	5	7
29. Job Placement	5	15	10
30. Follow-up	14	7	7

*1 = Highest Rank

For the specific needs and major goals data p (the coefficient of correlation) = .607. By this procedure, then, the estimate of the amount of correlation between the major goal rankings and specific need rankings is .61. The correlation coefficient can be interpreted as an estimate of reliability. Although the coefficient is not extremely high, there is a moderately strong positive relationship between national rankings of the goals and specific needs for urban vocational education. This positive relationship indicates that:

1. the major goals are generally comparable summaries for the specific needs;
2. the specific needs are generally meaningful operationalizations of major goal concepts; and
3. there are not significant differences between the rating patterns of the groups who completed the Major Goals and Specific Needs instruments.

An examination of Table 13 reveals fairly close agreement (less than five points difference) between goal and need rankings in 12 goal areas. The closer agreements tend to occur among the highest and lowest ranked goal areas. For example, there is close agreement between five of the top ten goal areas: Basic Academic Instruction, Funding Base, Community Relations and Support, Coordination with the Manpower Community, and Vocational Guidance. At the other end of the continuum, there is also close agreement between five of the ten lowest priority goal areas: Post-secondary Vocational Education, Facilities and Instructional Space, Teacher Involvement in Supplementary Activities, Quantity, Quality and Diversity of Personnel,

and Equal Educational Opportunities. There is also close agreement on the priority of Flexible Vocational Programming and Local Management, both in the medium priority range.

There are interesting and fairly large differences between some of the major goal and specific need priorities. However, many of these differences may be inflated due to several constraints described in the footnotes below. Keeping in mind the constraints on data interpretation, the goal areas where the magnitude of the difference between need rankings and goal rankings was ten or more points are described.

1. Preservice Preparation related specific needs (rank = 8) are higher ranked than the major goal (rank = 23).**

2. Serving Persons with Special Needs related specific needs (rank = 28.5) are lower ranked than the major goal (rank = 13).***

3. Curriculum Development related specific needs (rank = 21) are lower ranked than the major goal (rank = 8).*

4. Expendable Supplies related specific needs (rank = 27) are lower ranked than the major goal (rank = 16.5).***

5. Coping with Social Problems related specific needs (rank = 19) are higher ranked than the major goal (rank = 29).**

6. Work Experience related specific needs (rank = 17) are lower ranked than the major goal (rank = 7).***

* The specific needs for this goal area were highly specific and many were only tangentially related to the goal. This tended to lower the overall median ranking for the need cluster.

** The number of specific needs for this goal area was small, which tended to raise the overall median ranking.

*** No readily observable constraints.

Differences Among the Priorities by Size, Geographic Location, and Minority

In this section, the vocational education priorities of cities will be compared by size, city, geographic location and percent of minority population. The purpose of the analysis is to determine (1) significant differences in the magnitude of perceived need among various types of urban areas and (2) the extent of relationship among the priorities of various types of urban areas.

Goal Priorities by Size

Of the 106 cities included in the data analysis, 21 cities or 19.8 percent had more than 500,000 inhabitants and were classified as large. Twenty-five cities or 23.6 percent had between 200,000 and 500,000 inhabitants and were classified as medium. Sixty cities or 56.6 percent had less than 200,000 inhabitants and were classified as small.

To determine if the goals tended to be rated higher in some size cities than others, the mean ratings of the major goals of cities at these three levels of size were calculated and compared using Friedman's Rank Sums (S) statistic. The hypothesis that the magnitude of perceived priority was equal with respect to size was tested against the alternatives that the magnitude of priority was not equal with respect to size. The S value was 9.2. From the Chi Square distribution, we see that the lowest alpha level at which we can

reject the above hypothesis is $\alpha = .0125$. Hence, there is evidence to support the conclusion that the intensity of cities perceived needs differs with respect to size.

The sum rankings of the observations for each level of size were examined to determine where the most significant differences lay. An all treatment distribution free multiple comparison procedure based on Friedman Rank sums was applied. No significant differences among the level of need by size were found. However, the level of need is higher in both medium and large than small urban areas. There is a very little difference between the felt intensity of need in large and medium size urban areas. Table 14 illustrates the comparison of the magnitude of need by size.

Table 14

Comparison of the Magnitude of Need by Size

*R1 (Large) = 62	(R1 - R2) = 3 $p > .20$
R2 (Medium) = 65	(R1 - R3) = 9 $p > .20$
R3 (Small) = 53	(R2 - R3) = 12 $p > .20$

*R = Sum of Ranks. Larger numbers indicate greater magnitude of need.

The ranks of the goals in cities of different size were compared using Spearman's Rank Order Correlation to determine the extent of relationship among the priorities of small, medium and large cities. The ranks for each level of size

are listed in Table 15. The amount of correlation between the priorities of cities of different size is:

1. small and medium, p = .81
2. medium and large, p = .72
3. small and large, p = .84

Although there are moderately strong correlations among cities' priorities by all levels of size, these results show the least agreement between the priorities of medium and large cities. There is fairly high agreement between the priorities of both small and medium cities and small and large cities.

When the priorities of cities of different size were examined visually, several interesting trends became evident. First, the highest and lowest priorities were very similar across all sizes of cities. Differences appeared more in the medium priorities. Some of the more outstanding differences in cities' priorities by size are described in descending order of magnitude below.

1. Medium and small cities express a much stronger need for Up to Date Equipment than large cities (rank = 7 medium, rank = 12 small, rank = 24 large).

2. Medium size cities express a more urgent need for expanding and renovating Facilities and Instructional Space than either large or small cities. (rank = 11 medium, rank = 23.5 large, rank = 26.5 small).

3. Large cities experience a greater need for Flexible Varied Vocational Programming than either small or medium size cities (rank = 11 large, rank = 19.5 small, rank = 23 medium).

4. Medium cities express a greater need for Curriculum Innovation than large cities (rank = 8 medium, rank = 19.5 large).

5. Large cities perceive greater needs than small cities in Serving Persons with Special Needs (rank = 9 large, rank = 18 small).

6. Large cities perceive lesser need in Reducing Dropout, Absenteeism and Tardiness than medium and small cities (rank = 24 large, rank = 15 medium, rank = 15 small).

7. Small cities perceive a greater need to improve Local Management of vocational education than either medium or large cities (rank = 13 small, rank = 21.5 medium, rank = 18 large).

8. Small and medium cities perceive greater needs in the area of Work Experience then large cities (rank = 6 small, rank = 9.5 medium, rank = 14 large).

9. Large cities express greater needs in the area of Basic Academic Instruction than small cities (rank = 2 large, rank = 6 small).

Table 15

Ranks[1] of Major Goals in Cities of Different Size

Goal Area	Size		
	Small*	Medium**	Large***
1. Basic Academic Instruction	5.5	4.0	2.0
2. Relevance of Vocational Content	3.0	5.0	3.5
3. Work Experience	5.5	14.0	9.5
4. Curriculum Development	8.0	7.0	17.5
5. Serving Persons with Special Needs	18.0	9.0	12.5
6. Flexible, Varied Vocational Programming	19.5	10.5	22.5
7. Adult Vocational Education	21.0	16.0	25.0
8. Post-Secondary Vocational Education	30.0	28.0	28.0
9. Curriculum Innovation	16.0	19.5	8.0
10. Funding Base	2.0	1.0	1.0
11. Local Management	13.0	18.0	19.5
12. Community Relations and Support	7.0	8.0	5.0
13. Coordination with the Manpower Community	11.0	12.5	9.5
14. Cooperation Among the Levels of Vocational Education	27.0	26.5	28.0
15. Up-to-Date Equipment	12.0	24.0	7.0
16. Facilities and Instructional Space	24.5	21.5	11.0
17. Expendable Supplies	19.5	12.5	12.5
18. Personnel Development	14.0	16.0	22.5
19. Leadership Development	22.0	26.5	26.0
20. Teacher Involvement in Supplementary Activities	23.0	21.5	22.5
21. Quantity, Quality, and Diversity of Personnel	28.0	24.0	28.0
22. Preservice Preparation	24.5	16.0	19.5
23. Equal Educational Opportunities	26.0	29.0	22.5
24. Vocational Guidance	1.0	2.0	3.5
25. Reducing Dropout, Absenteeism, and Tardiness	15.0	24.0	15.0
26. Coping with Social Problems	29.0	30.0	30.0
27. Accessible Guidance Services	9.0	6.0	15.0
28. Transition from School to Work	10.0	19.5	17.5
29. Job Placement	4.0	3.0	6.0
30. Follow-up	17.0	10.5	15.0

[1]Rank 1 is highest.

*Less than 200,000 inhabitants. **Between 200,000 and 500,000 inhabitants. ***More than 500,000 inhabitants.

Goal Priorities by Geographic Location

The 106 cities included in the data analysis were classified into four geographic locations using census regions. Eighteen cities or 17 percent were in the Northeast. Thirty-four cities or 32 percent were located in North Central portion of the United States. Thirty-five cities or 33 percent were in the South. Nineteen cities or 18 percent were in the West.

The mean ratings of the major goals of cities in these four geographic locations were compared using Friedman's Rank Sums statistic to determine if the intensity of perceived need was related to geographic location. The S value was 14 which is significant at $\alpha = .003$ level. These results provide strong evidence that there are differences in the relative intensity of perceived need among cities in different geographic locations. The differences by geographic location appear to be greater than the differences by size. When geographic areas were compared to determine where the greatest differences existed, significant differences were found in the intensity of need between: cities in the Northeast and the South ($p \approx .05$); cities in Northeast and North Central United States ($p \approx .10$) and cities in the South and West ($p \approx .20$). There is little difference between the goal ratings in the Northeast and West and between North Central and Southern United States. Table 16 illustrates the comparisons of the magnitude of need by geographic location.

Table 16

Comparison of the Magnitude of Need by Geographic Location

*R1 (Northeast)	= 61	R1 - R2 = 23, $p \approx .10$
R2 (North Central)	= 84	R1 - R3 = 27, $p \approx .05$
R3 (South)	= 88	R1 - R4 = 6 $p > .20$
R4 (West)	= 67	R2 - R3 = 4 $p > .20$
		R2 - R4 = 17 $p > .20$
		R3 - R4 = 21 $p \approx .20$

* R = Sum of Ranks
Larger numbers indicate greater magnitude of need.

Using Spearman's Rank Order Correlation, the ranks of the major goals were compared to determine the extent of relationship among the priorities in the Northeast, North Central, West, and South. The ranks for each geographic location are listed in Table 17. The amount of correlation between the priorities of cities in different geographic location is:

1. Northeast and North Central, p = .73
2. Northeast and South, p = .73
3. Northeast and West, p = .76
4. North Central and South, p = .85
5. North Central and West, p = .67
6. South and West, p = .79

Table 17

Ranks of Major Goals in Cities in Different Geographic Locations

Goal Area	North-east	North Central	South	West
1. Basic Academic Instruction	1.5	3.0	6.0	9.0
2. Relevance of Vocational Content	1.5	6.5	1.0	4.0
3. Work Experience	4.0	9.0	9.5	4.0
4. Curriculum Development	11.5	12.0	5.0	7.0
5. Serving Persons with Special Needs	16.5	20.0	13.5	11.0
6. Flexible, Varied Vocational Programming	21.0	16.0	15.5	25.0
7. Adult Vocational Education	13.5	23.5	20.0	16.0
8. Post-Secondary Vocational Education	16.5	30.0	30.0	30.0
9. Curriculum Innovation	16.5	16.0	11.5	21.5
10. Funding Base	6.5	2.0	2.0	1.0
11. Local Management	21.0	16.0	9.5	23.5
12. Community Relations and Support	4.0	6.5	7.5	7.0
13. Coordination with the Manpower Community	11.5	19.0	7.5	7.0
14. Cooperation Among the Levels of Vocational Education	28.0	28.5	26.5	26.0
15. Up-to-Date Equipment	6.5	12.0	19.0	12.5
16. Facilities and Instructional Space	25.5	25.5	22.5	10.0
17. Expendable Supplies	8.5	16.0	21.0	12.5
18. Personnel Development	21.0	16.0	17.5	16.0
19. Leadership Development	27.0	27.0	22.5	20.0
20. Teacher Involvement in Supplementary Activities	21.0	25.5	24.5	16.0
21. Quantity, Quality, and Diversity of Personnel	25.5	28.5	28.0	28.0
22. Preservice Preparation	16.5	22.0	26.5	21.5
23. Equal Educational Opportunities	29.0	21.0	24.5	27.0
24. Vocational Guidance	4.0	1.0	4.0	2.0
25. Reducing Dropout, Absenteeism, and Tardiness	24.0	8.0	17.5	23.5
26. Coping with Social Problems	30.0	23.5	29.0	29.0
27. Accessible Guidance Services	10.0	5.0	11.5	16.0
28. Transition from School to Work	21.0	10.0	13.5	16.0
29. Job Placement	8.5	4.0	3.0	4.0
30. Follow-up	13.5	12.0	15.5	19.0

Overall, there is less agreement among the priorities by geographic location than by size. The priorities of cities are the most similar between North Central and Southern United States. The priorities of cities are the least similar between North Central and Western United States; North Central and Northeastern United States; and Northeastern and Southern United States.

A visual examination of the most outstanding differences among cities in different areas of the country concerning their perceived priorities was made. Again, there is fairly high agreement on the highest and lowest priority goals. But some very strong differences exist in the middle priority range. The greatest differences are highlighted in descending order of magnitude below.

1. The need to Reduce Dropout Absenteeism and Tardiness is viewed as a high priority in North Central United States (rank = 8), a moderate priority in the South (rank = 17.5), and a low priority in the Northeast (rank = 24) and West (rank = 23.5).

2. Expansion and rennovation of Facilities and Instructional Space is viewed as a higher priority need in the West than other places (rank = 10 West; rank = 25.5 Northeast; rank = 25.5 North Central; rank = 22.5 South).

3. The improvement of Local Management tools and techniques is perceived as a higher need in the South than other areas of the country (rank = 9.5 South; rank = 23.5 West; rank = 21 Northeast; rank = 16 North Central).

4. Coping with Social Problems is experienced as a higher priority in the South (rank = 11) and West (rank = 11) than either the Northeast (rank = 24) or the North Central region (rank = 23.5).

5. The need for more Up to Date Equipment is perceived to be higher in the Northeast than other regions of the country (rank = 6.5 Northeast; rank = 19 South; rank = 13 West; rank = 12 North Central).

6. Coordination with the Manpower Community is viewed as a less critical need in North Central United States than in other areas (rank = 19 North Central, rank = 7 West, rank = 7.5 South, rank = 11.5 Northeast).

7. The need for a sufficient level of Expendable Supplies is experienced as a higher need in the Northeast than other regions (rank = 9.5 Northeast; rank = 21 South; rank = 16 North Central; rank = 12.5 West).

8. Assisting students in their Transition from School to Work is viewed as a high need in the North Central Region (rank = 10), a moderate need in the South (rank = 13.5) and West (rank = 16) and a low need in the Northeast (rank = 21).

9. The need to improve Preservice Preparation of vocational personnel is viewed higher in the Northeast (rank = 16.5) than the South (26.5).

10. The improvement of Adult Vocational Education is viewed as a higher need in Northeastern (rank = 13.5) than North Central (rank = 23.5) United States.

11. Curriculum Innovation is viewed as a lower priority in the West than in other geographic regions (rank = 21.5 West; rank = 11.5 South; rank = 16 North Central; rank = 16.5 Northeast).

12. The need to improve Service for Persons with Special Needs is viewed as a higher priority in the West than other geographic regions (rank = 11 West; rank = 20 North Central; rank = 16.5 Northeast; rank = 13.5 South).

13. The need for more Flexible, Varied Vocational Programming is lower in the West and Northeast than other geographic regions (rank = 25 West; rank = 21 Northeast; rank = 16 South, rank = 16 North Central).

14. The expressed need for Leadership Development for vocational personnel is slightly higher in the West. (rank = 20 West; rank = 27 Northeast; rank = 27 North Central; rank = 22.5 South).

15. The need for Curriculum Development to upgrade curricula and curriculum materials is perceived to be a higher in the South and West than other geographic regions (rank = 5 South; rank = 7 West; rank = 11.5 Northeast; rank = 12 North Central).

16. The need for a more adequate and equitable Funding Base is viewed as slightly lower in priority in the Northeast than other geographic regions (rank = 6.5 Northeast; rank = 1 West, rank = 2 South; rank = 2 North Central).

Goal Priorities by Level of Minority Population

The 106 cities used in the data analysis were classified into three groups based on their level of minority population. Twenty cities or 19 percent had a minority population of over 30 percent and were classified as high. Forty cities or 38 percent had a minority population between 15 and 30 percent and were classified as medium. Forty-six cities or 43 percent had less than 15 percent minority level and were classified as low.

The mean ratings for the major goals by cities at these three levels of minority population were compared using Friedman's Rank Sum statistic to determine if the intensity of perceived need was related to minority level. The S value obtained was 32.98. This value is significant at the $\alpha = .001$ level. The alternative hypothesis of differences in the intensity of needs by cities' minority level is supported. The differences by minority level are more highly significant than either the differences by size or geographic location.

The ratings of the goals for the three levels of minority population were compared to determine the most significant difference between the groups. Using the multiple comparison procedures associated with Friedman's statistic, significant differences between high and low minority level cities ($p = .001$) and between high and medium minority level cities ($p = .005$) were found. Cities with a high minority concentration (i.e., above 30 percent) have more intense needs than cities with medium and lower minority levels. Table 18 illustrates the comparisons of the magnitude of need by minority level.

Table 18

Comparison of the Magnitude of Need by Minority Level

*R1 (High)	= 78.0	R1 - R2	= 26.5, $p \approx .005$
R2 (Medium)	= 51.5	R2 - R3	= 1, $p > .20$
R3 (Low)	= 50.5	R1 - R3	= 27.5, $p \approx .001$

*R = Sum of Ranks
Larger numbers indicate greater magnitude of need.

The ranks of the goals in cities with different levels of minority concentration were compared using Spearman's Rank Order Correlation method to determine the amount of agreement among the priorities of cities with high, medium and low minority levels. The ranks for each minority level are listed in Table 19. The amount of correlation between the

priorities of cities with different minority levels is:

1. low and medium, p = .85
2. low and high, p = :88
3. medium and high, p = .85

The results portray strong relationships among the priorities of cities with high, medium and low minority levels. There is more agreement among the priorities of cities when compared by minority level than by either size or geographic location.

As with the prior comparisons of the priorities of cities by size and geographic location, the highest five and lowest five priorities are similar across the three levels of minority population. Differences in the ranks emerge in the middle priority range. Some of the more interesting and larger differences are presented below in descending order of magnitude.

1. Maintaining Up to Date Equipment is seen as a greater need in high minority cities (rank = 6) than either medium (rank = 17.5) or low (rank = 13.5) minority cities.
2. High minority cities express a lesser need for Coordination with the Manpower Community than low minority cities. (rank = 17 High; rank = 6.5 Low)
3. Reducing Dropout, Absenteeism, and Tardiness is perceived as a greater need in High minority cities (R = 10.5) than low minority cities (R = 20)
4. High minority cities express a greater need for Plexible, Varied Vocational Programming (rank = 10.5 High; rank = 19.5 Medium; rank = 18.5 Low).
5. Serving Persons with Special Needs is perceived as a higher priority in high minority cities (rank = 10.5) than medium (rank = 17.5) or low (rank = 12.5) minority cities.
6. High minority cities express a greater need for Curriculum Innovation than low minority cities (rank = 10.5 High; rank = 16.5 Low).

Table 19

Ranks of Major Goals in Cities with Different Minority Concentration

Goal Area	Minority Level		
	Low*	Medium**	High***
1. Basic Academic Instruction	5.0	4.0	2.5
2. Relevance of Vocational Content	3.0	2.0	6.0
3. Work Experience	6.5	8.0	14.5
4. Curriculum Development	9.5	9.5	10.5
5. Serving Persons with Special Needs	12.5	17.5	10.5
6. Flexible, Varied Vocational Programming	18.5	19.5	10.5
7. Adult Vocational Education	21.5	22.0	19.0
8. Post-Secondary Vocational Education	30.0	30.0	29.0
9. Curriculum Innovation	16.5	11.5	11.5
10. Funding Base	1.0	3.0	1.0
11. Local Management	16.5	11.5	14.5
12. Community Relations and Support	8.0	5.5	6.0
13. Coordination with the Manpower Community	6.5	14.5	17.0
14. Cooperation Among the Levels of Vocational Education	28.5	25.0	29.0
15. Up-to-Date Equipment	12.5	17.5	6.0
16. Facilities and Instructional Space	21.5	23.0	23.5
17. Expendable Supplies	14.0	14.5	20.5
18. Personnel Development	15.0	13.0	20.5
19. Leadership Development	25.0	28.0	22.0
20. Teacher Involvement in Supplementary Activities	18.5	27.0	23.5
21. Quantity, Quality, and Diversity of Personnel	28.5	26.0	26.5
22. Preservice Preparation	24.0	21.0	25.0
23. Equal Educational Opportunities	26.0	24.0	26.5
24. Vocational Guidance	2.0	1.0	2.5
25. Reducing Dropout, Absenteeism, and Tardiness	20.0	16.0	10.5
26. Coping with Social Problems	27.0	29.0	29.0
27. Accessible Guidance Services	11.0	7.0	10.5
28. Transition from School to Work	9.5	19.5	17.0
29. Job Placement	4.0	5.5	4.0
30. Follow-up	23.0	9.5	17.0

*Less than 15 percent. **Between 15 percent and 30 percent. ***More than 30 percent

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Through a national study of the vocational education programs in cities with over 100,000 residents: (1) perceived needs were identified; (2) the relative national priority of these needs was determined; and (3) the priorities of cities were compared by their size, geographic location and minority level. To accomplish these three purposes, a four stage study was initiated: (1) feasibility study, (2) exploration of the needs, (3) synthesis of the needs, and (4) determination of priorities.

During the feasibility study, alternative methods for assessing needs were tested. A forced choice needs assessment instrument was developed through a review of the literature. The need statements and alternative scales for rating them were tested in two cities. Through the feasibility study, it was determined that a force choice instrument was not an acceptable approach to needs assessment because: (1) literature was not available for developing a comprehensive and current list of needs, (2) forced choice discrepancy analysis scaling was not well accepted by respondents, and (3) respondents wanted to be involved in the development of the need statements.

Consequently, a second stage was initiated to explore urban vocational education needs through two methods: personal interviews and mail survey. Personal interviews were conducted in 14 large cities with students, building and district level vocational educators, and representatives from the manpower community. Through an open-ended mail survey, sent to 160 cities, first-hand perceptions of needs were gathered from the person in charge of the city's vocational education programs and key staff members. Out of responses from 50 of the cities surveyed (30 percent) came over 6,000 statements of need for urban vocational education programs.

During the third stage of the study, statements were synthesized by clustering related needs into goal areas. The synthesis process was used to: (1) reduce the number of statements to a more manageable size, (2) organize the statements into a coherent conceptual framework, and (3) improve the comprehensiveness, accuracy, and directness of the statements using expert opinion and literature review. The synthesis resulted in a five part survey: a Major Goals instrument and four Specific Need instruments.

During the fourth stage of the study: (1) the national priorities for vocational education programs in large cities were determined and (2) differences among the intensity of need and priorities of cities by size, geographic location, and minority level were assessed. The priorities for urban

vocational education were determined through a Major Goals instrument which enumerated 30 general goals for urban vocational education and four Specific Needs instruments. The Specific Need instruments were in the areas of curriculum and instruction, administration, personnel, and guidance and counseling. In total, they contained 260 specific need statements organized into clusters related to each goal. Vocational education directors and central office staff in 160 large cities were asked to rate the relative priority of the goals and the relative degree of need of the needs through a mail survey. Responses were received from 111 cities or 70 percent of this population.

The mean ratings for the major goals and specific needs were calculated for all the responding cities. Based on the mean ratings, both sets of statements were placed in rank order from highest to lowest priority. The mean ratings for the major goals were also calculated for cities by their size (small, medium, and large); their geographic location (Northeast, North Central, South, and West); and their minority level (high, medium, and low). Based on the mean ratings, the goals were again placed in rank order from highest to lowest priority for each level of these three variables. The priorities of cities were then compared by their size, geographic location, and minority level: (1) to determine whether there were significant differences in the perceived magnitude or intensity of need in various types of urban areas using Friedman's Rank Sum Statistic, and (2) to

determine the amount of agreement among the priorities of cities in various types of urban areas using Spearman's Rank Order Correlation method.

Conclusions

Conclusion 1: Sixty percent of the ten highest national priority major goals relate to improving the linkages between vocational programs and the world of work through avenues, such as providing vocational guidance on careers, ensuring the relevance of vocational curricula to jobs, coordinating job placement efforts, improving community relations and support, expanding work experience opportunities for students, and coordinating with the manpower community.

Conclusion 2: Major goals related to the ongoing support and maintenance of vocational programs tend to be ranked as lower or medium national priorities. For example, expanding facilities, improving preservice preparation programs, increasing the number and quality of personnel and providing leadership development are lower priorities. Providing more up to date equipment, improving local management tools, providing a sufficient level of supplies, and providing personnel development are medium priorities.

Conclusion 3: The highest ranked national major goal area and 12 percent of the top 50 specific needs concern the funding base for vocational education programs in major urban areas.

Conclusion 4: Of the 50 top ranked specific needs for the nation, the greatest proportions are in the major goal areas of vocational guidance and community relations.

Conclusion 5: In general, large city directors of vocational education and members of their staffs across the nation rate both the major goals and specific needs in the areas of post-secondary vocational education and adult vocational education as lower priorities.

Conclusion 6: In general, large city directors of vocational education and members of their staffs across the nation perceive serving persons with special needs and equal educational opportunities to be lower priorities. Although serving persons with special needs was ranked 13th as a major goal, the specific needs for this area had a median rank of 28.5 of 30 areas.

Conclusion 7: Cities with a minority level above 30 percent experience more intense vocational education needs than either cities with a minority level between 30 and 15 percent ($p \approx .005$) or cities with a minority level below 15 percent ($p \approx .001$).

Conclusion 8: The vocational education priorities for cities with different minority levels are highly similar. Intercorrelations range from .85 to .88.

Conclusion 9: Although moderately strong correlations exist among the priorities of all types of large cities studied, the greatest patterns of differences occur among cities in different geographic locations. Vocational education priorities are the least similar between cities in North Central and Western United States (correlation = .67); North Central and North Eastern United States (correlation = .73) and Northeastern and Southern United States (correlation = .73).

Conclusion 10: The overall magnitude of the need for urban vocational education programs is significantly higher in the South than in the Northeast ($p \approx .05$). The magnitude of need is also greater in North Central than Northeastern United States ($p \approx .10$) and slightly higher in the South than in the West ($p \approx .20$).

Conclusion 11: No significant differences in the intensity of need were found among large cities of different size. However, the level of need is higher in both cities with between 200,000 and 500,000 residents and cities with over 500,000 residents than in cities with less than 200,000 residents.

Conclusion 12: The least correlation in priorities of cities by size were found between medium and large cities (correlation = .72). There is moderately strong agreement between the priorities in small and medium cities (correlation = .81) and small and large cities (correlation = .84).

The ranks assigned to the 30 major goals by cities of different size, geographic location, and minority level were also examined visually. Priorities whose ranks differed by ten points or more are presented in descending order of magnitude in the following conclusions.

Conclusion 13: Medium and smaller cities express a much stronger need for more up to date equipment than large cities.

Conclusion 14: The need to reduce dropout, absenteeism, and tardiness is viewed as a high priority by cities in North Central United States, a moderate priority in the South, and a low priority in the Northeast and West.

Conclusion 15: Medium size cities express a more urgent need for expanding and rennovating facilities and instructional space than either large or small cities.

Conclusion 16: Expansion and rennovation of facilities is viewed as a higher priority in the Western cities than other places.

Conclusion 17: The improvement of local management tools and techniques is perceived as a higher priority in cities in the South than in other areas of the country.

Conclusion 18: Coping with social problems is experienced as a higher priority in cities in the South and West than the Northeastern and North Central regions.

Conclusion 19: The need for more up to date equipment is perceived to be higher in Northeastern cities than other regions of the country.

Conclusion 20: Large cities experience a greater need for flexible, varied vocational programming than either small or medium size cities.

Conclusion 21: Coordination with the manpower community is viewed as a less critical need in North Central cities than in cities in other areas.

Conclusion 22: Medium size cities express a greater need for curriculum innovation than large cities.

Conclusion 23: The need for a sufficient level of expendable supplies is experienced as a higher need in Northeastern cities than in other regions.

Conclusion 24: Maintaining up to date equipment is viewed as a higher priority in high minority cities than either medium or low minority cities.

Conclusion 25: High minority cities express a lesser need for coordination with the manpower community than low minority cities.

Conclusion 26: Assisting students in their transition from school to work is viewed as a high priority in North Central cities, a moderate priority in Southern and Western cities and a low priority in Northeastern cities.

Conclusion 27: The need for improvement of preservice preparation of vocational personnel is rated higher by cities in the Northeast than the South.

Conclusion 28: The improvement of adult vocational education programs is viewed as a higher priority in Northeastern than North Central cities.

Conclusion 29: Curriculum innovation is viewed as a lower priority in the Western cities than in other regions.

Recommendations

Recommendations are directed to audiences at the local, state, and federal levels. Specific recommendations for each level, as well as several general recommendations, have been generated.

Federal and State Levels

1. Federal funding priorities for vocational education as discussed in the review of literature and included in Appendix A, should be reexamined in light of the priorities identified through this study. Three high priority goal areas seem especially pertinent for federal considerations: Vocational Guidance, Basic Academic Instruction for vocational students, and Community Relations, especially education and manpower coordination. Although federally sponsored programs are in operation for each of these areas, there are strong indications of a need for more assistance. Several of the current federal funding priorities for vocational education are not among the higher priorities of large city directors of vocational education and their staffs. For example, two USOE priority areas, post secondary vocational education and adult vocational education are among the lower priorities of the urban vocational educators surveyed in this study. Another USOE priority, serving persons with special needs, is perceived as a medium to low priority by the population surveyed. Discrepancies between federal and local priorities indicate a need to either increase the awareness and support of local urban vocational educators in post-secondary, adult, and special need vocational education programs or to increase the responsiveness of federal priorities to perceived local needs. The discrepancies also indicate that federal programs in these three areas may not improve the image of USOE with local urban vocational education practitioners.

2. The current procedures followed for allocating resources to large urban areas should be reassessed. The top priority goal area and many of the highest ranked specific needs concern the funding base for urban vocational education. A reassessment is needed:

   - to examine procedural problems at the federal and state levels which prevent local vocational programs from having firm commitments concerning the amount of and timelines for funds.

   - to consider alternative funding procedures, such as forward funding to districts based on long range plans; some direct funding to very large urban areas; general purpose as well as categorized funding; alternative funding bases; and modifications of current funding formulas to equitably account for the differences in the cost of delivering educational services in urban, rural and suburban areas.

3. At the state and federal levels, the results of the study should be used as a basis for gaining increased insight into local vocational practitioners' perceptions of their needs.

4. The higher priority goals and need should be examined for their research and development implications for labs, centers, and research coordinating units. Almost every priority has a "research and development" as well as an "implementation" interpretation. Examples of the R & D implications for three of the highest ranked specific needs are illustrated.

Need	R & D Implications
firmer commitments concerning the amounts of and timelines for vocational funding	examination of current funding procedures to identify system blocks, problem areas, and constraints and to recommend alternatives
increased parental awareness of vocational education opportunities as compared to college	development of a public information package on vocational education which can be adapted by local schools
more effective preservice counselor education programs in vocational guidance	research into the vocational guidance competencies which beginning counselors lack

5. The higher priority goals and needs identified through this study should be examined by national professional associations for their implications. It is strongly urged that groups, such as the National Association for Large City Directors of Vocational Education, the National Association for State Directors of Vocational Education, The American Vocational Association, and the National Advisory Council for Vocational Education give their support to the initiation and continuation of programs which meet the priority needs identified. Professional associations are also encouraged to facilitate the communication of the priorities to constituents and to lobby for the implementation of related programs.

6. Planners of professional development activities for vocational personnel should examine and interpret the findings of the study for their implications. Some priority areas for preservice and inservice programs which were identified are: preparing counselors in vocational guidance; new and innovative approaches to vocational education; industry based exploratory programs for vocational teachers; coordination between vocational and academic teachers; public information techniques; serving students with special needs; helping teachers instruct academically deficient students; improving vocational leaders skills in long range planning, evaluation, needs assessment, and program management; using follow-up information to improve programs; and maintaining current information on career opportunities and job practices.

Local Level

7. At the local urban school district level, the results of the study can be used as a basis for collecting more in-depth information about local vocational needs. The specific need statements can be used as criteria for evaluating local programs. For example, local programs can be evaluated as to the extent:

   - parents of school age children in the community are aware of vocational education programs
   - students receive counseling at enrollment
   - counselor time is spent with vocational students

- coordination between vocational and academic curricula is occurring

- student absenteeism and tardiness is reduced

8. Local urban school districts are encouraged to use the results of the study to communicate a more factual and compelling picture of their own needs as compared to national urban vocational education needs to constituents at the local, state, and national levels. The instruments used in this study can also be administered at the local level to assess needs. Both the general goal and specific need statements should prove useful for developing local programs objectives, preparing long range planning documents, and responding to requests for proposals.

9. At the local school district and school building level, it is recommended the results be used as a stimulus for discussion and planning. Task forces or other planning groups can build on the higher priority needs and goals to develop action plans for upgrading, expanding, or initiating programs.

General Level

10. The quality and delivery of vocational guidance services to students should be improved. Systematic procedures for counseling vocational students prior to their enrollment to help them select the right program are needed. Programs which help students develop positive work habits and attitudes should be developed. Well rounded aptitude and interest testing programs should be initiated.

11. Public information and community involvement programs are needed to help vocational educators communicate with their constituents, sponsors, and peers in the educational, manpower and general communities. Programs are needed for increasing: parental awareness of vocational education opportunitis as compared to college, federal and state awareness of urban vocational education needs, business and industrys' use of vocational students as employees, middle and high school students' awareness of vocational education opportunities, the general publics' awareness of vocational education, and general educators' awareness of vocational education.

12. The basic academic instruction received by vocational students needs to be upgraded. This can be accomplished, in part, through: increasing coordination between vocational and academic curricula and teachers; improving methods for diagnosing students remedial basic academic needs, improving remedial academic programs, developing curriculum materials in math and English geared to vocations, and assisting vocational teachers to instruct academically deficient students.

13. Although it is felt that the results of study provide valid and useful perceptual information about important needs, further study of the higher priority goals and needs using empirical information would further validate the perceptual information collected through the study as well as provide a more solid information base for initiating action.

14. A replication of this study to collect information about perceived needs in urban vocational education programs from other groups of people would provide useful information. The perceptions of needs by groups, such as employers, the unemployed, post-secondary and adult vocational educators, building level vocational personnel, and general educators would provide a broader, more representative picture of the needs.

APPENDIX

Exhibit A: Population of Large Cities for the Mail Surveys

Exhibit B: Introductory Letters for the Open-ended Mail Survey

Exhibit C: Open-Ended Need Survey

Exhibit D: Follow-up Post Card for the Open-ended Mail Survey

Exhibit E: Introductory Letters for the Forced Choice Mail Survey

Exhibit F: General Background and Instructions for the City Director of Vocational Education (for the forced choice mail survey)

Exhibit G: National Large Cities Vocational Education Needs Study Part I: Major Goals Survey

Exhibit H: National Large Cities Vocational Education Needs Study Part II: Specific Need Surveys

Exhibit I: Curriculum and Instruction Survey Items and Results

Exhibit J: Administration Survey Items and Results

Exhibit K: Personnel Survey Items and Results

Exhibit L: Guidance and Counseling Survey Items and Results

Exhibit A

Population of Large Cities for the Mail Surveys

Cities with 100,000 Residents or More

Akron, OH
Albany, NY
Albuquerque, NM
Alexandria, VA
Allentown, PA
Amarillo, TX
Anaheim, CA
Atlanta, GA
Austin, TX
Baltimore, MD
Baton Rouge, LA
Beaumont, TX
Berkeley, CA
Birmingham, AL
Boston, MA
Bridgeport, CT
Buffalo, NY
Cambridge, MA
Camden, NJ
Canton, OH
Cedar Rapids, IA
Charlotte, NC
Chattanooga, TN
Chicago, IL
Cincinnati, OH
Cleveland, OH
Colorado Springs, CO
Columbia, SC
Columbus, GA
Columbus, OH
Corpus Christi, TX
Dallas, TX
Dayton, OH
Dearborn, MI
Denver, CO
Des Moines, IA
Detroit, MI
Duluth, MN
Elizabeth, NJ
El Paso, TX
Erie, PA
Evansville, IN
Flint, MI
Fort Lauderdale, FL
Fort Wayne, IN
Fort Worth, TX
Fremont, CA
Fresno, CA
Garden Grove, CA
Gary, IN
Glendale, CA
Grand Rapids, MI
Greensboro, NC
Hammond, IN
Hampton, VA
Hartford, CT
Hialeah, FL
Hollywood, FL
Honolulu, HI
Houston, TX
Huntington Beach, CA
Huntsville, AL
Independence, MO
Indianapolis, IN
Jackson, MS
Jacksonville, FL
Jersey City, NJ
Kansas City, KS
Kansas City, MO
Knoxville, TN
Lansing, MI
Las Vegas, NV
Lexington, KY
Lincoln, NB
Little Rock, AR
Livonia, MI
Long Beach, CA
Los Angeles, CA
Louisville, KY
Lubbock, TX
Macon, GA
Madison, WI
Memphis, TN
Miami, FL
Milwaukee, WI
Minneapolis, MN
Mobile, AL
Montgomery, AL
Nashville-Davidson, TN
New Bedford, MA
New Haven, CT
New Orleans, LA
New York, NY
  Bronx Borough
  Brooklyn Borough
  Manhattan Borough
  Queens Borough
  Richmond Borough
Newark, NJ
Newport News, VA
Norfolk, VA
Oakland, CA
Oklahoma City, OK
Omaha, NB
Parma, OH
Pasadena, CA
Paterson, NJ
Peoria, IL
Philadelphia, PA
Phoenix, AZ
Pittsburgh, PA
Portland, OR
Portsmouth, VA
Providence, RI
Raleigh, NC
Richmond, VA
Riverside, CA
Rochester, NY
Rockford, IL
Sacramento, CA
St. Louis, MO
St. Paul, MN
St. Petersburg, FL
Salt Lake City, UT
San Antonio, TX
San Bernardino, CA
San Diego, CA
San Francisco, CA
San Jose, CA
Santa Ana, CA
Savannah, GA
Scranton, PA
Seattle, WA
Shreveport, LA
South Bend, IN
Spokane, WA
Springfield, MA
Springfield, MO
Stamford, CT
Stockton, CA
Syracuse, NY
Tacoma, WA
Tampa, FL
Toledo, OH
Topeka, KS
Torrance, CA
Trenton, NJ
Tucson, AZ
Tulsa, OK
Virginia Beach, VA
Warren, MI
Washington, D.C.
Waterbury, CT
Wichita, KS
Winston-Salem, NC
Worcester, MA
Yonkers, NY
Youngstown, OH

Source: U.S. Bureau of the Census. *U.S. Census of Population: 1970, Number of Inhabitants*, PC(1)–A1 and *General Population Characteristics*, PC(1)–B1, final reports, *United States Summaries*, and *Area Measurement Reports*, series GE-20, No. 1.

Largest Cities in the States without a City of 100,000 or More

Cheyenne, WY
Billings, MT
Fargo, ND
Souix Fall, SD
Anchorage, AL
Huntington, WV
Burlington, VT
Wilmington, DE
Portland, ME
Manchester, NH
Boise, ID

Exhibit B

NALCDVE
NATIONAL ASSOCIATION OF LARGE CITY DIRECTORS OF VOCATIONAL EDUCATION

July 9, 1975

TO: HEADS OF LARGE CITY VOCATIONAL EDUCATION AGENCIES

SUBJECT: National Large Cities Vocational Education Needs Study

The Center for Vocational Education at The Ohio State University is helping us put together a picture of the vocational education needs in our large cities through a national study. The results from this study will provide information for presenting more compelling evidence to state and federal legislators for better legislation and increased funding to large cities. The results should also help us internally to focus our priorities and systematically address our most important goals.

I strongly urge you to give close attention to completing the enclosed forms. Your participation is highly important to the success of this study. I feel confident it will provide useful information.

Sincerely yours,

Benjamin Whitten

Benjamin Whitten
President, NALCDVE

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Enclosures

Benjamin Whitten, Baltimore, Maryland, President
B. J. Stamps, Dallas, Texas, Vice President
Ronald L. Detrick, San Diego, California, Secretary-Treasurer

Executive Committee/Donald V. Healas, Cleveland, Ohio • Charles J. Mackey, Denver, Colorado • George R. Quarles, Brooklyn, New York
Charles Nichols, Minneapolis, Minnesota • Marvin R. Rasmussen, Portland, Oregon

THE CENTER FOR VOCATIONAL EDUCATION
The Ohio State University • 1960 Kenny Road • Columbus, Ohio 43210
Tel: (614) 486-3655 Cable: CTVOCEDOSU/Columbus, Ohio

DATE: July 29, 1975
TO: Heads of City Vocational Education Agencies
SUBJECT: National Large Cities Vocational Education Needs Study

Although the recession appears to be "over", it has left many problems in its wake. The situation is especially acute in our larger cities where the pain of a wounded economy is sharply felt through high unemployment, increased crime, and a diminishing tax base. The vocational education programs in our nation's large cities are looked to for providing leadership to help remedy these social problems. At the same time vocational education programs in many large cities are already critically overburdened and underfunded. Our efforts to provide sufficient and high quality education for city dwellers are often riddled with problems. What are these problems? What needs to be done to help reduce these problems? In what areas should vocational educators be taking leadership at this point in our nation's history? What are our national priorities for vocational education?

At present, no adequate information exists to answer these questions. The National Advisory Council on Vocational Education held hearings in five large cities in 1974 and found many serious problems. Yet no studies to date have depicted a comprehensive picture of the major problems and needs in all our large cities.

The Center for Vocational Education is conducting a national study of the needs in large urban districts to help supply more complete information about current problems. The National Large Cities Vocational Education Needs Study is financed by the U. S. Office of Education (EPDA 553). The results from this study will be used to: (1) guide the definition of vocational education priorities in large cities, (2) communicate a compelling argument for increasing financial support to cities through a forceful and comprehensive portrayal of current needs, (3) supply information for planning professional improvement activities for vocational education personnel.

All results of the study will be reported as national vocational education needs. No data on individual cities will be reported. Data will not be used to evaluate you or your school district. Confidentiality of all information will be maintained. We will send all participants a copy of the results of the study. Several city directors have commented that many promised results from studies have never arrived and they are left wondering if the study was ever completed or the information used in any way to improve the educational process. Our purpose is not to add another document to a dusty library shelf, but rather to help put accurate information in the hands of those who can and will use it to improve vocational education. Your cooperation is essential.

Sincerely yours,

Dan

Daniel E. Koble, Jr.
Research Specialist

DEK:pkl
Enclosures

Exhibit C

OPEN ENDED NEED SURVEY

Brief Description of the Study

Since this is a national study, information will be collected from 165 cities. This will include all cities with more than 100,000 inhabitants and the largest city in states and territories which do not have a city this large. The enclosed materials represent the first information gathering round for a two-phase study.

In this phase, information about the most critical problems and most urgent goals in large cities today will be collected from city heads of vocational education and selected members of their staff. In Phase II these responses will be combined to form a composite listing. The severity of each problem and desirability of each goal will be rated by heads of large city vocational programs across the nation. Results will be used to determine the areas of concern common to many cities and the highest priority national needs for vocational education.

Instructions for Completing the Enclosed Materials

1. This packet contains twelve separate sheets for collecting information about problems and goals in twelve areas of vocational education. A description of each of these twelve areas, guidelines for writing problem and goal statements, and an example specific to each area are presented at the top of each sheet.

2. Please complete the enclosed sheets by: (a) assigning one or more sheets to individuals in your district with responsibilities in and knowledge about each area, (b) providing your perception of the major problems and goals in any or all of the twelve areas.

3. There are two packets of problem/goal sheets enclosed for your convenience. One set can be used as a rough draft and the other set as a final copy. If possible, please type the copy which you return to The Center for Vocational Education.

4. Return the completed materials to:

Who?	Daniel E. Koble, Jr., Research Specialist The Center for Vocational Education 1900 Kenny Road, Columbus, Ohio 43210
How?	First Class Mail
When?	Postmarked no later than August 20, 1975

5. We are interested in your perceptions and the perceptions of selected members of your district about the major problems and goals for your city's vocational education programs. If it is possible to document problems with factual data, it will be appreciated but it is not a prerequisite.

6. We prefer to have a complete response from you. Please try to write some problems and goals for all 12 areas. If an area does not apply to your city, mark the sheet "Does Not Apply" and return it to us with your completed sheets. If it is impossible for you to have complete information by the deadline, we will accept a partial return. We must have your responses by the deadline, August 20.

Administration Chart

This chart is for your use to assign the attached sheets to appropriate individuals in the district. Please add your perceptions of problems and goals to each sheet.

Area*	Assigned To	Date Out	Date In
1. Secondary Vocational Education			
2. Post-Secondary Vocational Education			
3. Part-time Adult Education			
4. Curriculum and Instruction			
5. Guidance and Counseling			
6. Job Placement and Follow-Up			
7. Administrative Services			
8. Supervisory Services			
9. Facilities, Equipment, etc.			
10. Personnel			
11. Community Relations			
12. Social Problems/Special Students			

*See the top of each sheet for a description of the areas.

COMMUNITY RELATIONS

Includes initiating and/or maintaining relations with business and industry, specific community groups, government agencies, advisory councils, parents, research and development organizations, the general public and other community organizations at the local, state, and federal levels.

Instructions: Describe your perception of the major concerns in this area of vocational education for this city using the following guidelines:

(1) Write a brief, yet specific, description of the current problems. A problem is defined as any situation in which you feel that current activities are seriously lacking in either scope or quality to adequately meet the essential needs of students. Do not describe the background and causes of problems.

(2) Write your recommended goals for what should be done to reduce or solve each problem. A goal is defined as the desired state of affairs for each problem situation. It is usually appropriate to list several goals for each problem. Do not describe how goals should be accomplished.

Example:

Problem: Although it has lessened in the past few years, the perception of vocational education as the catch-all for second-class citizens is still held by many citizens.

Goals: 1) Wider distribution of information about exemplary vocational-education programs and salary rates for various blue-collar workers to parents of elementary and junior high school age children and to the students themselves, 2) more success stories and information in local media about vocational education.

Problem: _____

_____

_____

Goals: _____

_____

_____

_____

_____

_____

Problem: _____

_____

_____

Goals: _____

_____

_____

_____

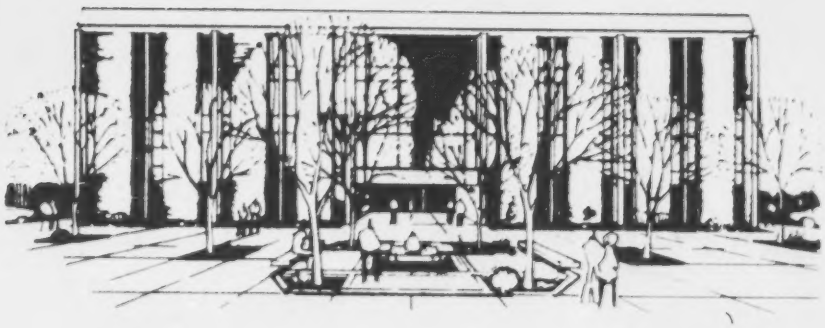
_____

_____

(Over)

Exhibit D

THE CENTER FOR VOCATIONAL EDUCATION
The Ohio State University · 1960 Kenny Road · Columbus, Ohio 43210



Since the month of August was full of vacations and extra-busy schedules for many of you, the deadline for returning your response to the National Large Cities Vocational Education Needs Study has been extended to September 24, 1975.

Even a hasty response will be appreciated. If you need another copy of the survey instrument please call collect (614) 486-3655 or write.

Sincerely,

Dan

Dan Koble
Research Specialist

Exhibit E

March 3, 1976

TO: Large City Directors of Vocational Education

FROM: National Large Cities Vocational Education Needs Study: Phase II

In a few days you are going to receive the second phase of the National Large Cities Vocational Education Needs Study. Many of you have already responded to the first phase of this study by providing a list of major problems and goals for the vocational programs in your city. Your response was appreciated and has been summarized to prepare the second phase of the survey.

The packet of materials you will receive may look time consuming to complete. Actually, it is not. The survey is divided into two parts. As the director of the vocational education agency in your city, you will be asked to respond to only the first part of the survey. This should require approximately fifteen minutes of your time. The second part is divided into four short questionnaires on curriculum, personnel, administration, and guidance and counseling. These should be assigned to the most appropriate individuals in your district to complete. Each form requires from fifteen to thirty minutes to fill out.

Please respond to the survey as soon as you can after receiving it. The response from your city will help shape the future of urban vocational programs.

Thank you for your cooperation.

Cordially,

Benjamin Whitten

Benjamin Whitten, President
National Association of Large City
Directors of Vocational Education

Daniel E. Koble, Jr.

Daniel E. Koble, Jr., Research Specialist
The Center for Vocational Education

March 12, 1976

TO: Large City Directors of Vocational Education

SUBJECT: National Large Cities Vocational Education Needs Study: Phase II

There are serious and unresolved needs in large city vocational education programs. The resources of many cities, both financial and human, have not been adequate to resolve the difficulties that increase rather than diminish. Many large city vocational educators feel that only strong support at the national level will help resolve these needs. An important first step to systematically meeting high priority needs is a focused, comprehensive, and accurate national data base.

Purpose of the Study. The purpose of the National large Cities Vocational Education Needs Study is to determine national priorities for vocational education in large cities as perceived by urban vocational educators.

Procedure. In the first part of the enclosed survey you are asked to rate the priority of a series of major goals for urban vocational education. These goals summarize the primary concerns expressed by vocational educators in over fifty large cities. Members of your staff are aksed to participate in the second part of the survey by rating the degree of need in specific areas related to each major goal.

Use of Results. The results of the study will be provided to the United States Office of Education to help establish resource allocation priorities for federal funds. The information will also be used to identify common areas of concern to cities which need increased emphasis in future professional development, curriculum development, program development, and research activities.

Your participation in this study is essential to its success. Completed individual questionnaires will be held in strict confidence by The Center for Vocational Education personnel. No data on individual cities will be reported. We strongly urge you to work with your staff to complete both parts of the survey and return it in the enclosed envelope by April 8, 1976. Enjoy a cup of coffee on us as you share your perception of the priorities for urban vocational education.

Cordially,

Benjamin Whitten

Benjamin Whitten, President
National Association of Large City
Directors of Vocational Education

Daniel E. Koble, Jr.

Daniel E. Koble, Jr., Research Specialist
The Center for Vocational Education

Exhibit F

GENERAL BACKGROUND AND INSTRUCTIONS FOR THE CITY DIRECTOR OF VOCATIONAL EDUCATION

Background of the Study

In the spring of 1975, the U.S. Office of Education authorized The Center for Vocational Education to conduct a two-phase nationwide study to determine the needs of vocational programs in the major urban areas. Both mail surveys and personal interviews were used. Needs were defined as important differences between "what is" and "what ought to be" in educational programs.

Fifty of the 164 cities surveyed responded to a preliminary open-ended mail survey. Among these were almost 70 percent of the largest 30 cities in the United States. Out of these responses came over 6,000 problem and goal statements concerning urban vocational education. In addition, personal interviews were conducted with vocational educators, students and members of the manpower community in 14 large cities. The information gathered through the mail survey and personal interviews has been summarized into the statements contained in the enclosed survey instruments.

Instructions for Completing the Enclosed Materials

1. Contents. This packet contains two major parts. Part I (tan in color) is a list of thirty goal statements for meeting major needs in vocational education. Part II contains specific need statements related to each major goal. Part II is organized by area into four separate questionnaires of various hues:

   a. Curriculum and Instruction (pink)
   b. Administration (yellow)
   c. Personnel (green)
   d. Guidance and Counseling (blue)

2. Who should respond? The City Director of Vocational Education should respond to Part I personally. Estimated completion time is 15 minutes. The four questionnaires in Part II should be assigned to the individuals in your district with the most knowledge of each area. Estimated completion time ranges from 30 to 50 minutes. Specific instructions for filling out each instrument are provided. Response to only one set of questionnaires from each city is requested.

3. Deadline. Please return the completed survey in the enclosed, stamped, self-addressed envelope by APRIL 8, 1976.

THANK YOU!

Exhibit G City Identification No._____

NATIONAL LARGE CITIES VOCATIONAL EDUCATION NEEDS STUDY

PART I: MAJOR GOALS

Instructions: The head of the city's vocational education agency should complete this form. This part contains 30 goal statements for meeting critical needs in vocational education. Read through all the goals first. Then rate the relative priority of each goal for the vocational education programs in your city as: (1) Lower priority, (2) Medium priority, or (3) Higher priority. Try to equally divide the goals among the three priority ratings. RATE AT LEAST FIVE GOALS AS LOWER PRIORITY, AT LEAST FIVE GOALS AS MEDIUM PRIORITY, AND AT LEAST FIVE GOALS AS HIGHER PRIORITY. Be sure to rate all 30 goals. Indicate your rating by circling the appropriate number beside each goal.

EXAMPLE

	Priority		
	1 Lower	*2 Medium*	*(3) Higher*
Basic Academic Instruction. Provide opportunities for all vocational students to acquire the reading, communication, and math skills required for coursework and jobs.			

When rating the priority of the goals, consider the intensity or severity of the underlying problem, the urgency of the situation, and the potential impact of meeting the goal on the quality of vocational education.

Keep in mind that your rating of priority is relative to the total set of items. There are no absolute lows or absolute highs. You may feel that almost all the goals are high priority. Yet distinctions between higher and lower priority goals are necessary.

If you feel that any of the statements are not applicable for the vocational programs under your jurisdiction, write "NA" beside the goal.

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Tel (614) 486-3655 Cable CTVOCEDOSU Columbus, Ohio

		Priority		
		Lower	Medium	Higher
1.	Basic Academic Instruction. Provide opportunities for all vocational students to acquire the reading, communication, and math skills required for coursework and jobs.	1	2	3
2.	Relevance of Vocational Content. Insure the relevance of vocational curricula to current job practices and opportunities through effective means for identifying, selecting, and updating content.	1	2	3
3.	Work Experience. Expand opportunities for students to explore and practice job skills in both community and school settings.	1	2	3
4.	Curriculum Development. Upgrade and improve vocational curricula and the curriculum materials used by students and educators.	1	2	3
5.	Serving Persons with Special Needs. Improve the ability of vocational education to serve persons with special needs (i.e., physical or mental handicaps, limited English speaking ability, inmates in correctional settings, migrants, etc.).	1	2	3
6.	Flexible, Varied Vocational Programming. Increase the flexibility of vocational instruction to meet the pressure for more enrollment and to serve the variety of individuals in urban settings.	1	2	3
7.	Adult Vocational Education. Expand adult vocational education programs to more adequately serve the training needs of adults who are unemployed or underemployed.	1	2	3
8.	Post-Secondary Vocational Education. Assist the orderly development of post-secondary vocational education programs, methods, and materials.	1	2	3
9.	Curriculum Innovation. Improve and expand the development, diffusion, and maintenance of new ideas in vocational education.	1	2	3
10.	Funding Base. Provide a more adequate and equitable funding base for large city vocational education programs from local, state, and federal sources.	1	2	3
11.	Local Management. Provide tools and techniques for improving local planning, management, and evaluation of vocational education programs.	1	2	3
12.	Community Relations and Support. Better communicate the content and benefits of vocational education to parents, students, employers, and all general educators.	1	2	3
13.	Coordination with the Manpower Community. Pursue better coordination with business, industry, labor, and other key segments of the manpower community.	1	2	3
14.	Cooperation Among the Levels of Vocational Education. Increase cooperation among the various levels and departments in vocational education.	1	2	3
15.	Up-to-Date Equipment. Improve the planning and financing of equipment for vocational instruction so up-to-date equipment can be maintained.	1	2	3

16.	Facilities and Instructional Space. Expand and rennovate the facilities and space available for vocational education.	1	2	3
17.	Expendable Supplies. Provide a sufficient level of supplies for operating all vocational programs.	1	2	3
18.	Personnel Development. Improve opportunities for practicing vocational education personnel to maintain and expand their competencies.	1	2	3
19.	Leadership Development. Define leadership roles and design and implement leadership preparation programs for vocational administrators and supervisors.	1	2	3
20.	Teacher Involvement in Supplementary Activities. Increase the participation of vocational teachers in supplementary activities, such as curriculum development, professional development, community relations, and job placement.	1	2	3
21.	Quantity, Quality, and Diversity of Personnel. Provide a greater quantity of, more capable, and a wider variety of specialized personnel for vocational programs.	1	2	3
22.	Preservice Preparation. Improve the preservice preparation of vocational education personnel to meet present and emerging competency needs.	1	2	3
23.	Equal Educational Opportunities. Develop standards and procedures for enrolling students in appropriate vocational programs on an equal opportunity basis.	1	2	3
24.	Vocational Guidance. Provide comprehensive guidance and counseling services so vocational students can better select careers and educational programs suited to their interests and abilities.	1	2	3
25.	Reducing Dropout, Absenteeism, and Tardiness. Develop services and procedures to reduce student dropout rates, absenteeism, and tardiness.	1	2	3
26.	Coping with Social Problems. Develop mechanisms for coping with delinquency, social problems, and disruptive activities which affect urban schools.	1	2	3
27.	Accessible Guidance Services. Make guidance, counseling, and placement services more accessible to all vocational students.	1	2	3
28.	Transition from School to Work. Develop pre-employment job readiness programs and post-employment follow-through activities for assisting students in their transition from school to work.	1	2	3
29.	Job Placement. Coordinate and expand efforts at all levels (teacher, school, district, state, federal) to place vocational students in occupations related to their education.	1	2	3
30.	Follow-up. Improve and expand follow-up studies of former students and their employers.	1	2	3

EHXIBIT H

NATIONAL LARGE CITIES VOCATIONAL EDUCATION NEEDS STUDY

PART II: SPECIFIC NEEDS

Instructions for City Director: *Please assign the following four questionnaires to the most appropriate individuals in your district to complete. You may wish to respond to parts of the questionnaires personally.*

ADMINISTRATION CHART

Questionnaire	Assigned to	Out	In
CURRICULUM AND INSTRUCTION: Refers to planning, developing, implementing, and updating curricula for secondary, post-secondary, and adult vocational education programs.			
ADMINISTRATION: Refers to planning, managing, financing, and evaluating vocational education programs.			
PERSONNEL: Refers to preparing, hiring, supervising, updating, and evaluating vocational personnel.			
GUIDANCE AND COUNSELING: Refers to counseling, placing, following-up, and providing other pupil personnel services to vocational students.			

Exhibit I

City Identification No. _____

Principal role of respondent _____
(please write in)

NATIONAL LARGE CITIES VOCATIONAL EDUCATION NEEDS STUDY

Curriculum & Instruction

Instructions: The following statements describe areas of need reported by vocational educators in over 50 cities. Quickly read through all the statements first. Then examine each statement individually and rate its degree of need for your school district from (1) Lower to (5) Higher.

Lower Need		Medium Need		Higher Need
1	2	3	4	5

Altogether there are 84 need statements or items. Try to equally divide these items among the five categories of need shown above. ASSIGN AT LEAST EIGHT ITEMS TO EACH CATEGORY. Assign the remaining items to the categories that you feel are most appropriate. Please respond to every item. Indicate your rating by circling the appropriate number beside each item.

EXAMPLE

	Degree of Need				
Basic Academic Skills	*Lower*		*Medium*		*Higher*
Exploration of the requirements of business and industry for math reading, and communication skills in their employees.	*1*	*(2)*	*3*	*4*	*5*

A need is defined as an important difference between "what is" and "what ought to be." When rating the degree of need in each of the following areas, consider both the magnitude of the difference, and the importance of reducing the difference, for the vocational education programs in your city. Give higher ratings to the areas which are in greater need of development, improvement, or expansion.

Keep in mind that your rating of the degree of need is relative to the total set of items. There are no absolute lows or absolute highs. You may feel that almost every item represents a high need. Yet distinctions between higher and lower needs are necessary.

Please provide a response to every item. Completing this instrument should require about 50 minutes of your time.

CURRICULUM AND INSTRUCTION

Basic Academic Skills (Reading, Communication and Math)	Rank	Mean
1. Exploration of the requirements of business and industry for math, reading and communication skills in their employees.	52.5	3.51
2. Methods for diagnosing the basic academic competencies of students so that appropriate remedial activities can be prescribed.	39.5	3.61
3. Remedial basic skill programs for students with weak academic skills.	46	3.56
4. Assisting vocational teachers to instruct the academically deficient students in their vocational classes.	50	3.52
5. Coordination between vocational and academic curricula so that academic courses emphasize vocational applications and academic skills are improved within vocational courses.	7	3.96
6. Advanced academic training for students in vocational programs which require high reading levels or proficiency in grammer.	189.5	2.84
7. Curriculum materials in math and English geared to vocations.	48.5	3.55
8. Vocational curriculum materials written at low reading levels.	162	2.94
Relevancy of Vocational Content		
9. Accurate, current information about the manpower requirements of business and industry.	82	3.33
10. Workable system for determining the current practices, technologies, and equipment in use by business and industry.	119	3.18
11. Up-to-date and valid information about the job competencies needed in various occupational areas.	32.5	3.64
12. Systematic procedures for selecting the most appropriate content to teach in vocational courses.	72	3.38
13. Standardized vocational course outlines within the city schools.	253.5	2.31
14. Relevant city-wide curricula and program standards (which can be used as criteria for evaluating program offerings).	184.5	2.85

	Rank	Mean
15. Procedures for reviewing and eliminating programs when their enrollment or job opportunities no longer meet predetermined standards.	116.5	3.19
16. Systematic initiation of new vocational programs in emerging occupations and fields with expanding employment opportunities.	13.5	3.86
Work Experience		
17. Expansion of cooperative work experience programs to include all students.	165.5	2.92
18. Appropriate and diversified work stations so students can have meaningful on-the-job experiences.	101	3.24
19. City-wide coordination of cooperative work-study programs.	221	2.70
20. Supportive services, such as transportation and close job supervision, so all students, including the handicapped and disadvantaged can participate in existing cooperative work-study programs.	79	3.34
21. Legislation to protect both employers and students from liability for on-the-job errors or mishaps.	141.5	3.09
22. Simulated work experience opportunities for students who cannot be placed in regular cooperative work-study programs.	132.5	3.12
23. Experiential instructional activities (such as field trips) to introduce students to various aspects of business and industry.	206	2.77
24. Involvement of volunteers (retired persons and persons on loan from business/industry/labor) in vocational education.	175	2.90
25. Systematic ways to identify, categorize, evaluate and use community resources for instructional purposes.	144	3.08
26. Preparation of students in "work habits" and "work attitudes" (dependability, pride of craftsmanship, efficient use of time, etc.).	see Guidance Counseling #36	
Curriculum Development		
27. Involvement of local vocational personnel in planning, evaluating, and designing curricula.	137.5	3.10

		Rank	Mean
28.	Involvement of students, graduates, and parents in developing vocational programs.	221	2.70
29.	Involvement of representatives from the manpower community in developing and updating vocational programs.	141.5	3.09
30.	Current course outlines for all vocational courses.	153.5	3.00
31.	Communication of vocational educator's requirements for specific instructional materials to publishers.	228.5	2.60
32.	Network of exchange for curriculum materials among agencies involved in vocational education (to share ideas and minimize duplication of effort).	122.5	3.15
33.	Teacher in-service preparation in the design of instructional materials (e.g., course outlines, lesson plans, modules, etc.).	77.5	3.35
34.	Vocational curriculum materials which are free from stereotypes and biases related to certain fields of work, sex, economic status, culture, and race.	188.5	2.83
35.	Instructional media, such as films, for use in shops, laboratories, and classrooms.	224.5	2.66
36.	Curriculum guides to promote continuity in program content.	165.5	2.92
	Serving Persons with Special Needs		
37.	Vocational education programs for early school leavers and unemployed youth.	44	3.57
38.	Vocational education programs which serve the special requirements of racial minority populations (Native American, Black, Mexican American, Oriental, etc.).	237	2.51
39.	Methods and materials for teaching vocational students with limited English speaking ability.	233	2.56
40.	Descriptive system for identifying handicapped and other occupationally disadvantaged persons.	234	2.55
41.	Descriptive system for designing instructional programs for occupationally disadvantaged persons.	169	2.91
42.	Assessment of the needs for and barriers to mainstreaming appropriate handicapped students into regular vocational education programs.	113	3.20

	Rank	Mean
43. Criteria for identifying appropriate handicapped students for mainstreaming.	201	2.79
44. Assessment of program needs, evaluation of existing programs, and development of new vocational education programs for persons in correctional settings.	243	2.47
45. Assessment of program needs, evaluation of existing programs, and development of new vocational education programs for migrants.	259	1.86
46. Ways to adjust classroom practices, (i.e., teaching techniques, classroom management and curriculum, etc.) to meet the requirements of different subgroups of students with special needs.	113	3.20
47. Determination of the special technical competencies required by vocational personnel to instruct and counsel different subgroups of students with special needs.	113	3.20
Flexible, Varied Vocational Programming		
48. Flexible scheduling of vocational classes at convenient times during the day, evening, on weekends, and throughout the year.	109.5	3.21
49. Availability of vocational instruction in convenient locations throughout the community.	189.5	2.84
50. Vocational education curricula and instructional materials for use in open entry-open exit situations.	34	3.63
51. Alternative, flexible instructional strategies for students who are unable to succeed in and/or accept the existing system (e.g., on-the-job training, short-term vocational training, etc.).	55	3.48
52. Advanced standing and flexible requirements for graduation.	169	2.91
53. Development and use of individualized instruction.	86.5	3.31
54. Development and use of modularized instruction.	155	2.99
55. Development and use of competency or performance-based instruction.	16	3.84
56. Vocational programs of interest to females.	146	3.06

		Rank	Mean
57.	General training of students in fundamental occupational skills.	189.5	2.84
58.	Availability of additional advanced technical and highly skilled vocational education courses for the gifted and talented.	95	3.26
	Adult Vocational Education		
59.	Vocational education programs for mature women, retirees, and other older adults.	249	2.41
60.	In-plant basic education and vocational courses for employees who want to upgrade their skills.	189.5	2.84
61.	Competency-based adult vocational education.	145	3.07
62.	Providing adults with entrepreneurial competencies which facilitate self-employment.	217	2.72
63.	Community-based homemaking education and family life programs for adults living in economically depressed areas.	214.5	2.73
64.	General interest and self-improvement courses for adults interested in vocational skills at less than degree level (e.g., household repair, small engine tune-up, etc.).	242	2.48
65.	Development of employee educational leave and tution aid programs.	195	2.31
66.	Counseling for adult students, especially minority populations.	172	2.91
67.	Procedures for screening and placing adult students.	207	2.76
68.	Support services, such as child care and transportation for adult students who require these services.	210.5	2.74
69.	Procedures for identifying and screening part-time vocational instructors.	250	2.40
70.	In-service programs for part-time instructors in adult programs.	184.5	2.85
71.	Sufficiently high hourly wages and benefits to attract part-time instructors of high quality.	157	2.97
72.	Exemplary coordination activities between vocational education programs and CETA-funded public employment training programs.	175	2.90

Post-Secondary Vocational Education	Rank	Mean
73. Development of modularized and individualized post-secondary vocational education programs in new and emerging areas.	208	2.75
74. Development and evaluation of post-secondary inner-city student programs.	236	2.53
75. Identification and evaluation of post-secondary vocational education programs that reduce dropout rates.	181.5	2.86
76. Consideration of inputs from post-secondary institutions in making funding allocations.	255.5	2.05
77. Cooperative agreements between public, private, and proprietary post-secondary vocational education programs.	239	2.50
78. Criteria, procedures, and instruments to assess the productivity and input of post-secondary vocational education programs.	204	2.78
Curriculum Innovation		
79. Procedures for incorporating demonstrated innovations into the operating school district when outside funds are no longer available.	20	3.77
80. Administrative techniques for installing tested innovations in other educational settings.	95	3.26
81. Strategies for using new ideas in vocational education at a faster rate.	59.5	3.44
82. Administrative procedures which free teachers to create innovative instructional materials.	95	3.26
83. Training curriculum coordinators and supervisors to effectively advocate valid innovations.	81.5	3.33
84. Training vocational teachers and counselors in new and innovative approaches to vocational education.	11.5	3.88

Exhibit J

City Identification No. _____

Principal role of respondent _____
(please write in)

NATIONAL LARGE CITIES VOCATIONAL EDUCATION NEEDS STUDY

Administration

Instructions: The following statements describe areas of need reported by vocational educators in over 50 cities. Quickly read through all the statements first. Then examine each statement individually and rate its degree of need for your school district from (1) Lower to (5) Higher.

Lower Need		Medium Need		Higher Need
1	2	3	4	5

Altogether there are 83 need statements or items. Try to equally divide the items among the five categories of need shown above. ASSIGN AT LEAST EIGHT ITEMS TO EACH CATEGORY. Assign the remaining items to the categories that you feel are most appropriate. Please respond to every item. Indicate your rating by circling the appropriate number beside each item.

EXAMPLE

Funding Base	Degree of Need				
	Lower		*Medium*		*Higher*
Resource allocation formulas which allow for differences in the cost of delivering vocational education in urban and rural areas	*1*	*2*	*(3)*	*4*	*5*

A need is defined as an important difference between "what is" and "what ought to be." When rating the degree of need in each of the following areas, consider both the magnitude of the difference and the importance of reducing the differences for the vocational education programs in your city. Give higher ratings to the areas which are in greater need of development, improvement, or expansion.

Keep in mind that your rating of the degree of need is relative to the total set of items. There are no absolute lows or absolute highs. You may feel that almost every item represents a high need. Yet distinctions between higher and lower needs are necessary.

Please provide a response to every item. Completing this instrument should require about 50 minutes of your time.

THE CENTER FOR VOCATIONAL EDUCATION
The Ohio State University • 1960 Kenny Road • Columbus, Ohio 43210

ADMINISTRATION

Funding Base		Rank	Mea
1.	Resource allocation formulas which allow for differences in the cost of delivering vocational education in urban and rural areas.	27.5	3.70
2.	Direct federal funding to major urban areas without their elimination from state funding.	19	3.79
3.	Communication with federal offices concerning guidelines for applying for federal monies.	95	3.26
4.	Development of alternative bases for obtaining funds at the local level.	32.5	3.64
5.	Firm commitments concerning amounts of and timelines for vocational funding so local districts may plan and initiate programs on schedule.	1	4.39
6.	District forward funding based on long-range plans to permit continuity of program planning and services.	2	4.03
7.	General purpose funds, as well as categorized funding so some district priorities can be addressed.	25.5	3.72
8.	Impartial distribution of federal monies by state departments of vocational education.	132.5	3.12
9.	Proportional distribution of available funds within the district.	247.5	2.42
Local Management			
10.	Development and use of annual and long-range plans for vocational education on a district-wide basis.	98.5	3.25
11.	Formal needs assessment procedures for determining the requirements of the various groups served by vocational education to help establish local priorities and expenditures.	126.5	3.14
12.	Strategies for retrenchment due to decreasing enrollments and limited resource availability.	199.5	2.81
13.	Operating base for managing local vocational education programs which gives the chief vocational offices the authority to function at the policy-making level.	52.5	3.51

		Rank	Mean
14.	Organizational and staffing patterns which optimize use and effectiveness of personnel and resources.	196.5	2.82
15.	Appropriate criteria and techniques for evaluating the quality of vocational education programs.	66.5	3.41
16.	Positive ways of coping with disruptive activities (school integration, student control, teacher militancy, and/or political interference).	184.5	2.85
17.	Alternative administrative strategies for maximizing vocational education program goals while using varying levels of resource allocation.	137.5	3.10
18.	Procedures for measuring the relative cost, effectiveness, and benefits of different program alternatives.	95	3.26
Community Relations and Support			
19.	Up-to-date, supportive public image of vocational education.	22.5	3.76
20.	Community general awareness of the vocational program offerings available.	27.5	3.70
21.	Availability of public relations information to disseminate about vocational education (e.g., success stories of former students, research results, program descriptions, etc.).	74.5	33.6
22.	Parental awareness of the goals and opportunities available in secondary and post-secondary vocational programs as compared to college.	3.5	4.00
23.	Contacts maintained with key political elements of the community concerning the value and goals of vocational education (e.g., mayor, city council, etc.).	72	3.36
24.	Communication with all general educators (principals, assistant principals, supervisors, department chairpersons, teachers, counselors, and other staff) concerning the goals and content of vocational education.	36	3.62
25.	Frequent and consistent communication with employers to provide information on the programs offered, services provided, and employees available through vocational education programs.	46	3.56
26.	Communication with middle and high school students through various avenues to convey the career opportunities in secondary and post-secondary vocational education programs.	24	3.74

		Rank	Mean
27.	Middle school and high school counselors knowledge about available secondary and post secondary vocational programs.	25.5	3.72
	Coordination with the Manpower Community		
28.	Guidelines for increasing business and industrial access to vocational education through advisory councils, industry/education alliances and other avenues.	137.5	3.10
29.	Involvement of organized labor in planning vocational education programs.	189.5	2.84
30.	Methods for involving lay advisory councils as more than rubber stamp committees in planning, evaluating, and updating vocational programs.	126.5	3.14
31.	Recognition and use of the input provided by lay advisory councils.	147	3.05
32.	Coordination with employment agencies (private and public).	213	2.73
33.	Coordination with CETA and mayor's manpower agencies.	201	2.79
34.	Coordination with private educational agencies (OIC, trade schools, etc.)	257	2.04
35.	Cooperative planning of in-service seminars and job-exchange programs for vocational personnel with business, industry, and labor.	64	3.42
36.	Business and industry's use of vocational education programs as a source of employees.	70.5	3.77
37.	Involvement of business and industry in guiding employees into continuing education when they need additional skills.	59.5	3.44
38.	Willingness of local employers to employ the handicapped, minorities, and male and females in non-traditional fields.	56.5	3.47
	Cooperation Among and Within Levels of Vocational Education		
	(School Level)		
39.	Coordination between introductory and advanced vocational courses within the same program.	231.5	2.57
40.	Coordination and mutual empathy among the vocational faculty, support staff, and administrative staff at the building level.	264	2.93

	Rank	Mean
41. Interdisciplinary cooperation among the various vocational departments.	210.5	2.74
42. Rapport and cooperation between academic and vocational teachers.	22.5	3.76
43. Cooperation between vocational education instructors and industrial arts instructors.	169	2.91
44. Articulation among district level, school level, department level, and course level instructional goals and objectives.	86.5	3.31
(District Level)		
45. Coordination among vocational offerings in pre-vocational, secondary and post-secondary programs.	126.5	3.14
46. Elimination of unnecessary duplication of vocational offerings in city schools.	244	2.46
47. Communication between the building level and central office vocational staff	231.5	2.56
48. Commitment to vocational education by local chief administrators and governing boards.	91.5	3.27
(State and Federal Level)		
49. Awareness by federal and state vocational education leaders of the critical large city vocational education issues.	9.5	3.91
50. Beneficial relationships with state and intermediate level administrative and supervisory personnel.	137.5	3.10
51. Clear definition of the domains of vocational education and career education.	204	2.78
52. Clear definition of the role of vocational education in continuing education.	219	2.71
Equipment		
53. Standards, procedures, and funds for replacing obsolete equipment.	17	3.81
54. Procedures and space for warehousing older equipment and accessories.	245.5	2.43

		Rank	Mean
55.	Use of alternative ways for securing required equipment, such as exchange plans, donations from industry, sharing equipment among schools, etc.	157	2.97
56.	Exposure of faculty members to new equipment.	157	2.97
57.	Education of vocational staff in writing succinct specifications on equipment.	217	2.71
58.	Planning and ordering of equipment which avoids delays in delivery.	228.5	2.60
59.	Custodial system for checking in equipment to the school building.	245.5	2.43
60.	Guidelines and procedures for full utilization of existing equipment.	224.5	2.66
61.	System of preventative maintenance for equipment.	103.5	3.23
62.	Education of interested teachers and students in equipment maintenance and repair.	150.5	3.03
63.	Reduction of theft and vandalism of both large and small equipment.	61.5	3.43
	Facilities and Instructional Space		
64.	Availability of vocational education facilities to meet enrollment requests.	61.5	3.43
65.	Availability of vocational education centers and tactics for attracting students to them.	39	3.61
66.	Availability of residential schools.	258	1.90
67.	Use of facilities in business, industry and labor for vocational instruction.	148.5	3.04
68.	Alternative ways of providing vocational facilities of a temporary and low cost nature.	86.5	3.31
69.	Development of standardized designs to facilitate proper architectural planning of flexible new facilities which will minimize costs of future modifications and expansion.	169	2.91
70.	Guidelines for better utilization of available building space.	221	2.69

		Rank	Mean
71.	Facilities which are aesthestically appealing.	227	2.61
72.	Facilities which are accessible to physically handicapped students.	87	3.31
73.	Shops and labs which simulate actual business and industry environments and permit flexibility.	64	3.42
74.	Separate, quiet classroom facilities for shop related instruction.	152	3.01
75.	Adequate storage space.	70	3.38
76.	Parking space at the vocational school or center.	239	2.50
77.	Transportation to vocational centers or centrally located area schools from outlying areas.	196.5	2.82
78.	Transportation during the school day to assist vocational students to participate in field trips and industry-based work experience.	98.5	3.25
79.	Transportation of equipment, materials, and supplies to and from school buildings.	255.5	2.05
Supplies			
80.	Allocation of funds specifically for purchasing supplies.	130.5	3.13
81.	Reduction of the variance from school to school in the provision of supplies.	239	2.50
82.	Workable system for ordering, checking in, and dispensing supplies.	251	2.37
83.	Reduction of theft and vandalism of supplies.	150.5	3.03

Exhibit K:

City Identification No. _____

Principal role of respondent _____
(please write in)

NATIONAL LARGE CITIES VOCATIONAL EDUCATION NEEDS STUDY

Personnel

Instructions: The following statements describe areas of need reported by vocational educators in over 50 cities. Quickly read through all the statements first. Then examine each statement individually and rate its degree of need for your school district from (1) Lower to (5) Higher.

Lower Need		Medium Need		Higher Need
1	2	3	4	5

Altogether there are 40 need statements or items. Try to equally divide these items among the five categories of need shown above. ASSIGN AT LEAST FOUR ITEMS TO EACH CATEGORY. Assign the remaining items to the categories you feel are most appropriate. Please respond to every item. Indicate your rating by circling the appropriate number beside each item.

EXAMPLE

Personnel Development	*Degree of Need*				
	Lower		*Medium*		*Higher*
Organizing and teaching courses during the first year of teaching.	(1)	2	3	4	5

A need is defined as an important difference between "what is" and "what ought to be." When rating the degree of need in each of the following areas, consider both the magnitude of the difference and the importance of reducing the difference for the vocational education programs in your city. Give higher ratings to the areas which are in greater need of development, improvement, or expansion.

Keep in mind that your rating of the degree of need is relative to the total set of items. There are no absolute lows or absolute highs. You may feel that almost every item represents a high need. Yet it is essential to request that you make somewhat difficult distinctions between higher and lower needs.

Please provide a response to every item. Completing this instrument should require about 30 minutes of your time.

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PERSONNEL

Personnel Development (in the following areas:)	Rank	Mean
1. Updating occupational competencies.	53.5	3.51
2. Organizing and teaching courses during the first year of teaching.	107	3.21
3. Maintaining current career and vocational information in areas, such as job requirements, working conditions, and employment opportunities for various occupational areas.	43.5	3.57
4. Understanding the unique problems and requirements for working in an urban area.	126.5	3.14
5. Using community resources as part of the instructional process.	89.5	3.30
6. Developing the special awareness, instructional skills, and service skills required to serve the handicapped, minorities, and other groups with special needs.	29	3.68
7. Remediating sex stereotyping that has existed in the past.	184.5	2.85
8. Sponsoring vocational youth organizations.	230	2.59
Leadership Development		
9. Opportunities for vocational leaders to improve skills in areas, such as long range planning, needs assessment, program evaluation, management techniques and information systems.	39.5	3.61
10. Enhancement of the authority, credibility and influence of middle management personnel within the local school system.	64	3.42
11. Clearly defined job description for vocational supervisors concerning their administrative and supervisory responsibilities.	162	2.94
12. Appropriate authority and credibility for vocational supervisors in areas, such as personnel evaluation, and facilitating innovation.	126.5	3.19
Teacher Involvement in Supplementary Activities		
13. Involvement of teachers in community relations.	109.5	3.20
14. Involvement of teachers in job placement.	109.5	3.20
15. Use of lay advisory committees by teachers.	169	2.91

		Rank	Mean
16.	Involvement of teachers in in-service education and industry based exploratory and on-the-job experiences.	18	3.80
17.	Participation of teachers in professional organizations.	210.5	2.74
18.	Involvement of teachers in vocational youth organizations.	153.5	3.00
19.	Incentives, such as salary for an extended school day, 12-month employment, released time, and course credit to motivate vocational personnel to participate in supplementary activities.	194	2.83
20.	Procedures for dealing with more demanding teacher contract agreements which may restrict teachers' participation in activities other than teaching.	194	2.83
21.	Involvement of teachers in deciding how their programs are to be directed, supervised, and evaluated.	200	2.71

Quantity, Quality, and Diversity of Personnel

(Quantity)

22.	Adequate number of qualified applicants for vocational teaching positions in all areas.	100	3.24
23.	Adequate number of qualified applicants for top and middle management positions in vocational education.	179.5	2.88
24.	Recruitement of qualified potential teachers directly from business and industry.	126.5	3.14
25.	Appropriate ratio of vocational supervisors to teachers.	214.5	2.73
26.	Appropriate student-counselor ratio at the pre-vocational, secondary and continuing education levels.	48.5	3.55

(Quality)

27.	Up-to-date teacher certification standards.	226	2.62
28.	Standards and proficiency tests for appraising non-degree personnel entering the vocational teaching field.	137.5	3.10
29.	Sufficiently high salaries for vocational instructors to compete with business and industry for personnel.	89.5	3.30
30.	Procedures for collecting and using personnel evaluation data.	223	2.68

(Diversity)		Rank	Mean
31.	Recruitment and selection of qualified women for vocational education leadership positions.	130.5	3.13
32.	Specialists in specific areas of instruction, such as special education, remedial basic skills education, and English as a second language.	204	2.78
33.	Full-time job placement coordinators.	74	3.37
34.	Para-professionals to aid teachers, especially those with special needs students in their classes.	126.5	3.14
35.	Professional support staff, such as school psychologists, social workers and nurses.	252	2.32
36.	Qualified staff in the area of personnel development.	210.5	2.74
Preservice Preparation			
37.	Coordination with teacher education institutions to communicate curriculum suggestions and personnel requirements.	72	3.38
38.	Formal pre-service training for vocational education administrators.	116.5	3.19
39.	Formal pre-service training for part-time vocational instructors.	159.5	2.96
40.	Effective pre-service counselor education programs for preparing counselors in vocational guidance.	5.5	3.99

Exhibit L

City Identification No. _____

Principal role of respondent _____
(please write in)

NATIONAL LARGE CITIES VOCATIONAL EDUCATION NEEDS STUDY

Guidance & Counseling

Instructions: The following statements describe areas of need reported by vocational educators in over 50 cities. Quickly read through all the statements first. Then examine each statement individually and rate its degree of need for your school district from (1) Lower to (5) Higher.

Lower Need		Medium Need		Higher Need
1	2	3	4	5

Altogether there are 53 need statements or items. Try to equally divide these items among the five categories of need shown above. ASSIGN AT LEAST FIVE ITEMS TO EACH CATEGORY. Assign the remaining items to the categories you feel are most appropriate. Please respond to every item. Indicate your rating by circling the appropriate number beside each item.

EXAMPLE

	Degree of Need				
Vocational Guidance	*Lower*		*Medium*		*Higher*
Infusion of career education concepts into all vocational instruction.	*1*	*2*	*3*	(*4*)	*5*

A need is defined as an important difference between "what is" and "what ought to be." When rating the degree of need in each of the following areas, consider both the magnitude of the difference and the importance of reducing the difference, for the vocational education programs in your city. Give higher ratings to the areas which are in greater need of development, improvement, or expansion.

Keep in mind that your rating of the degree of need is relative to the total set of items. There are no absolute lows or absolute highs. You may feel that almost every item represents a high need. Yet distinctions between higher and lower needs are necessary.

Please provide a response to every item. Completing this instrument should require about 40 minutes of your time.

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GUIDANCE AND COUNSELING

Vocational Guidance	Rank	Mean
1. Infusion of career education concepts into all vocational instruction.	46	3.56
2. Clear-cut delivery system for supplying career information and skills to vocational students.	39.5	3.61
3. Variety of accessible career guidance resource materials for teachers and counselors.	91.5	3.27
4. Career materials for vocational students available in all classrooms.	120.5	3.17
5. Pre-vocational orientation and exploratory programs for middle school students to introduce them to several career clusters.	36	3.62
6. Well-rounded and valid testing program including interest and aptitude tests for assisting all vocational students, ninth grade through adult, in selecting a vocation.	15	3.85
7. Counseling prior to enrollment to assist students in clarifying their purpose for enrolling in vocational education and selecting the right program.	3.5	4.00
8. Extensive orientation program for entering vocational students to introduce them to the purpose, requirements, daily routine, working conditions, salary ranges, and employment opportunities in various vocational fields.	38	3.46
9. Career development programs for special groups such as women, minorities and handicapped.	77.5	3.35
Equal Educational Opportunities		
10. Enrollment of the handicapped (physical, mental, or emotional), ethnic minorities and economically disadvantaged in vocational education programs on an equal opportunity basis.	181.5	2.85
11. Enrollment of males and females in vocational programs which have been traditionally dominated by one sex.	122.5	3.15
12. Enrollment of females in vocational programs.	194	2.83
13. Enrollment of "college-bound" students in vocational programs.	120.5	3.17

		Rank	Mean
14.	Enrollment of part-time vocational students in vocational programs.	241	2.49
15.	Performance standards for selecting students into vocational education programs.	160	2.96
16.	Trained recruiters to contact hard-to-reach populations who could potentially benefit from continuing their education.	178	2.89
	Reducing Drop-Out, Absenteeism, and Tardiness		
17.	Retention programs for potential dropouts.	66.5	3.41
18.	Evaluation and dissemination of information about exemplary vocational programs that reduce drop-out rates.	84	3.32
19.	Counseling for students with negative attitudes toward work, the educational system, themselves and/or others.	9.5	3.91
20.	Counseling for physically and mentally handicapped students enrolled in vocational programs.	101	3.24
21.	Flexible procedures for switching programs or transferring to other courses when students discover that they have made the wrong decision.	105.5	3.23
22.	Tutoring programs for students enrolled in courses beyond their abilities.	175	2.90
23.	Counseling for disadvantaged students concerning financial aids, such as loans, tuition waivers, and part-time jobs.	175	2.90
24.	Student financial aid.	235	2.54
25.	Ways to reduce student absenteeism and tardiness.	8	3.95
	Coping with Social Problems		
26.	Systematic use of community social service organizations to provide assistance to vocational students with problems.	143.5	3.08
27.	Methods for handling student discipline problems.	148.5	3.04
28.	Security measures for limiting theft of equipment or supplies, and vandalism to school property.	134	3.11
29.	Positive ways of coping with student delinquency problems (e.g., vandalism, weapons, alcohol or drug abuse, etc.).	56.5	3.47

Accessible Guidance Services	Rank	Mean
30. Allocation of counselors' time so that an adequate percentage is spent in face-to-face counseling with vocational students.	5.5	3.99
31. Use of non-counselors, such as teachers, parents, former students, and administrators in providing guidance services.	103.5	3.23
32. Use of innovative approaches to bring counseling to students, such as mobile counseling labs.	217	2.72
33. Providing some sytematic counseling to all students, not just when they are in trouble.	11.5	3.88
34. Orientation for vocational students to the guidance, counseling, and job placement services available from the school and greater community.	238	3.61
Transition from School to Work		
35. Pre-employment job readiness programs to help students learn job seeking skills, such as job hunting, job interviews, completing job applications, etc.	36	3.62
36. Opportunities for students to develop positive work habits and attitudes (e.g., dependability, ability to follow through, efficient use of time, pride of craftsmanship, willingness to learn).	13.5	3.86
37 Opportunities for all vocational students to develop leadership skills and motivation through avenues such as vocational youth organizations.	198.5	2.81
38. Supplementary "life skills" education in areas such as money management.	109.5	3.21
39. Opportunities for students to develop problem-solving skills for coping with work entry and job adjustment problems.	32.5	3.64
40. Opportunities for students to become familiar with economic aspects of the world of work.	116.5	3.19
Job Placement		
41. Central district job placement office which coordinates and provides information to school-based placement efforts.	81.5	3.33
42. Maintenance of an up-to-date, easily accessible job bank of employment opportunities for vocational students.	52.5	3.51

		Rank	Mean
43.	Coordinated involvement at the school level of vocational teachers, counselors, and advisory committee members in helping vocational graduates find jobs.	64	3.40
44.	Procedures for supplying state and federal employment agencies with information on graduating students.	247.5	2.42
45.	Guidance and counseling programs that incorporate employee career progression plans.	175	2.90
46.	Opportunities for former students to receive job-related counseling and further placement assistance after they leave school.	179.5	2.88
47.	Contact with employers of special need students after graduation to discuss emerging job-related problems that require attention.	105.5	3.23
	Follow-Up		
48.	Collection of information from present employers of vocational graduates concerning graduates on-the-job performance.	32.5	3.64
49.	Follow-up of former vocational students at specified intervals for five to seven years to collect information on their employment record and job satisfaction.	81.5	3.33
50.	Standardized follow-up questionnaires that produce useful information and can be easily understood by students and employers.	75.5	3.36
51.	System for contacting former students who may be highly mobile.	162	2.94
52.	Personal contact with some former students and their employers to gain in-depth information about job performance and job satisfaction.	137.5	3.10
53.	Systematic procedures for using the information collected through follow-up studies to improve the educational process.	42	3.59

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